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Levulose (Honey) in Athletics

By W. L. Finley, D. D. S.
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THE attention of physiologists, physical educationists and enthusiasts on diet has been directed in the past few years to the intensive use of carbohydrates in the dietary of athletes.

Authorities in all parts of the world coincide as to the necessity of a large proportion of sugars in the food arrangement of athletes participating in such sports as long distance running, walking, rowing and basket ball.

In view of the above, the following items are of interest. According to experiments conducted at Yale University some time ago, an oarsman uses up fuel equal to almost one-half pound of sugar during a four-mile test.

In Boston, two years ago, extensive experiments were carried out on Marathon runners and the sum total of the evidence collected showed that the athletes using a large proportion of sugars in their diet displayed much less fatigue upon completion of their race than did the remaining runners who did not take care of this very important item of extra fuel.

Upon completion of the test race in Boston, blood sugar tests were carried out, and they definitely showed higher figures in the cases of the runners using extra sugar, while the remainder showed very low figures and displayed much greater exhaustion; in some cases to the point of collapse and coma.

In 1924, in Toronto, the writer, collaborating with a member of the University staff, conducted tests over a period of time, relating to the reaction of long distance walkers on a specially-arranged, carbohydrate bolstered dietary. Proteins were cut to the minimum, i. e. 12%. Fats to 30% and carbohydrates raised to 58% of the total intake, of the athletes in question. Blood sugars, urines and heart tests were taken, including recovery rates.

The men who acted as controls did not change their dietary except to have it fairly well balanced. (See "Diet of a Moderate Worker" by Chittenden.) The "Sugar Group," to differentiate, was supplied on the day of the test with meals which consisted almost wholly of carbohydrates. One hour prior to the test race the same men were given 100 grams of anhydrous dextrose in a solution of lemon juice and water.

Our first tests were carried out with anhydrous dextrose, but because of the heavy cost this was discarded in favor of a solution of dextrose, galactose, etc., such as is used in infant foods. Finally, it was decided to use clover honey as a material par excellence, its main advantage being that it was easily assimilated, slightly laxative and non-irritating to the lining of the digestive tract in contra-distinction to sucrose or ordinary cane sugar.

The summary of evidence upon completion of the tests showed that the "Sugar Group" was less exhausted, recovered much more rapidly from the effects of the test race and showed much less albuminuria than did the controls.

Since that time we have advised all our distance men, that is, those running or walking from one-half mile upwards, to arrange their dietary as already stated in the beginning of this ("Toronto") report.

At certain periods it was necessary for the walking group to cover great distances, and while engaged thus the honey intake in one case amounted to five pounds weekly. This was in the case of a vegetarian who at the present time holds the World's Professional 1,000-mile walking record. This man, examined by medical men from the Jefferson Hospital, after taking part in the Pyle Transcontinental Race, was informed that his condition was as that of a man who had just returned from a vacation in Florida.

In quite a number of other cases the consumption was as high as two and a half to three pounds weekly. Sickness, by the way, was practically unknown, the resistance of these men being very high, partly because of their regular exercise and partly due to the care taken in eating.

The Toronto men upon whom the tests were carried out have competed since 1924 with very great success, one of them being the National Champion of the United States and Canada, and also the record holder for the United States and Canada at the Olympic distance of 50,000 metres. At any time these men appeared in the States as performers they have returned winners. A few of their records appear below:

1930.—U. S. A. Junior Champs. Detroit, 1st, 2nd, 3rd.

1930.—National U. S. A. 50,000 Metre Champs., 1st Individual and Team Prize.

1931.—National U. S. A. 50,000 Metre Champs., 1st. Individual and record.

1931.—Atlantic City, 50,000 Metre, 1st. Individual and Team Prize.

1930.—National U. S. A. 7 mile—1st.

192 .—National U. S. A. 7 mile—1st.

192 .—National U. S. A. 1 mile—Jr.—1st.

1930.—Canadian 50,000 Indiv. and Team (U. S. A. 2nd).

1931.—Canadian 50,000 Indiv. and Team (U. S. A. 2nd).

1929.—Canadian 50,000 Indiv. and Team (U. S. A. 2nd).

Some experimentations were carried on in England two or three years ago upon long distance walkers and runners, where the athletes, when at about the point of exhaustion, were given a sugar solution consisting of one-half glass of ordinary sugar, one-half glass of water and a teaspoon

of ordinary salt. The reports upon this particular form of emergency restorative were sufficient to prove that sugar was the principal factor in the athletes' rapid recovery.

The following is an excerpt from "Fitch's Dietotherapy:"

Training Diets—Boat Crews

Protein gms.	Fat gms.	Carbohydrates gms.	Calories
162	175	449	4,130
153	223	468	4,620
145	170	375	3,705
160	170	448	4,075
135	152	416	3,675
171	171	434	4,070
155	181	487	4,315
		Average	
155	177	440	4,085

As will be seen, the carbohydrates form a large percentage — approximately 60% of the total intake.

Pavlow, the famous Russian Physiologist, states that proteins are unsuitable for prolonged exertion and uses as examples the race horse, Japanese rickshaw runners and the oarsmen of Holland, whose diet consists mainly of carbohydrates. Proteins in quantity are used for supplying nervous energy and ensuring correct correlation of nerve and muscle with rapidity and accuracy.

In the opinion of one of the most prominent physiologists in the United States, the next investigation into "Fatigue of Athletes" should cover:

1. Blood Sugar, before and after test race.
2. Urinalysis, before and after test event.
3. Blood concentration.
4. Carbon Dioxide combining power.
5. Non-protein nitrogen.
6. Uric Acid test.

Carbohydrates should be advanced to 65% and a large number of subjects used, to obviate error.

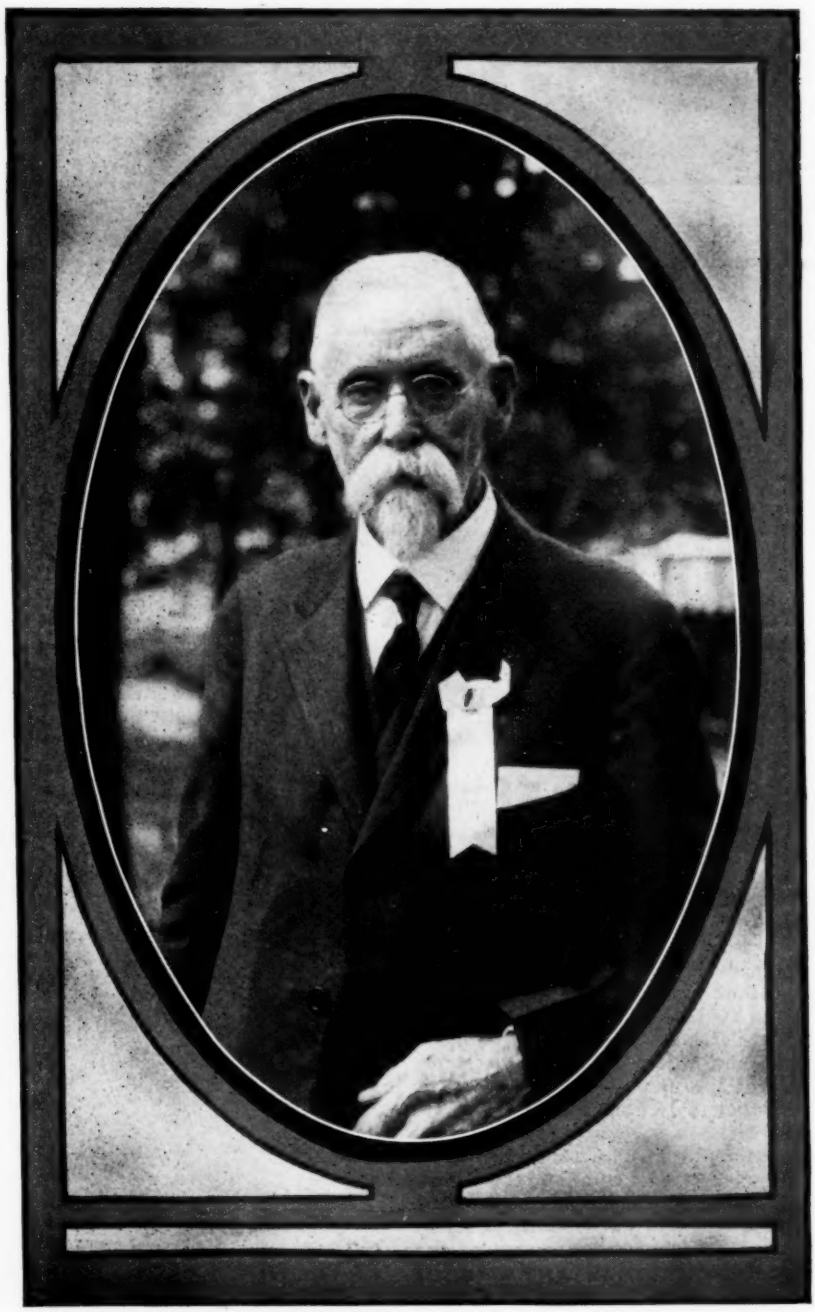
The group with which the writer has been associated for the past ten years has engaged intensively in athletics, particularly Track, Field and Walking, without breakdown of any kind. This says a great deal for their method of eating, for it is strongly felt that care in food arrangement plays the most vital part in their success.

Lee A. Strong Named Chief of Bureau of Entomology

Lee A. Strong, who has for the past four years been Chief of the Bureau of Plant Quarantine, will become Chief of the Bureau of Entomology, October 1, according to Secretary Wallace. The Bureau of Entomology sponsors the work of the Office of Bee Culture and the Bee Culture Field Stations.

Mr. Strong succeeds Dr. C. L. Marlatt, who is retiring after nearly 45 years of service.

Death of John M. Davis



JOHN M. DAVIS, one of the most noted queen breeders of the past fifty years, died at his home in Spring Hill, Tennessee, October 18th. He was 86 years old.

Mr. Davis was one of the best known queen breeders and a most reliable man. In the American Bee Journal for September, 1927, he was reported as having sold some 2,200 queens that summer. That is, of course, less than some of our queen breeders sell at present. But few men can please the customers in queen selling as he did.

Mr. Davis was an early subscriber and contributor to the Journal. We find articles from his pen as far back as 1880, when he stated, in the October number, that he had attended the National Convention at Cincinnati and was highly pleased.

Mr. Davis' picture which appears above was on the cover page of the American Bee Journal in October, 1927, when he was 80 years old.

Who Can Beat This?

Most beekeepers can produce instances of misinformation about bees in the newspapers, but for sheer fantastic nonsense it is submitted that the following takes the prize. It is clipped from the "Magazine Section" of the Winnipeg Free Press of Saturday, September 16. It appears in a box and was evidently looked upon by the editors as a real tid-bit of interesting scientific information:

Why Do Bees Swarm?

The latest theory about the puzzle of the swarming bees is that our hive bees are descended from Indian bees which migrate when flowers die in one district and bloom in another, and that our bees retain the age-old migratory instinct.

When a queen leaves a hive with a large number of followers her instinct has urged her to seek fresh supplies of food. Swarming does not usually take place at the height of a particular honey-flow but as one begins to fail.

From April to August the supply of the nectar of flower of which bees make honey is very irregular. There is a gap for instance between the blooming of apple-blossom and of clover. Then the old migratory instinct asserts itself. though the swarm may actually travel but a few yards from home.

Readers will notice that there is but one statement which is verified by the facts and that is the one about there being a gap between fruit bloom and clover. For the rest it is all wrong. Bees are not descended from Indian bees—we know their origins back a couple of thousand years at all events. They swarm at the beginning of the main flow and not at the end of it. If the story were true we should have swarms galore in fall. The swarm is simply the bees natural method of increase, for without it bees would die out.

Is it not amazing that after a hundred years of scientific bee culture such stories should be given wide publicity?

Hy. W. Sanders,
Manitoba.

Credit Due to Pacific Coast Bee Culture Field Laboratory for Preparation of "Honey Marketing in California"

Unfortunately, in announcing the honey marketing bulletin on page 393 of our October number, we gave no credit to the Pacific Coast Bee Culture Field Laboratory for this work in determining the factors of honey marketing in California. The investigation was a cooperative one between the Pacific Coast Bee Culture Field Laboratory and the California Agricultural Experiment Station.

THE HUMAN PUZZLE

Who Is He?

Originator of ————. Former associated with ————. Now head of the ————. Well, the truth is we can't say a thing that won't give him away and we prefer that you earn your bee books with more difficulty. Who is the bespectacled gentleman? First three correct guesses will get a well bound, instructive book on bees. Try it this month. Get out a postal quickly and tell us your name for—Gosh, you tell us!

The October "Puzzle."

Over thirty guesses for October! So the total grows and as long as it grows we must keep on—until the guessers give up or the "puzzles" give out.

The straw-hatted man was "down south" but he does not live there. A. L. Kildow, Apiary Inspector of Illinois and Mrs. Kildow love Florida and find it draws then back each year. It is just about as cheap to live there as it is at home. Can't say whether "Chief" caught the fish or not.

First three correct guesses were from F. W. Peters, Belleville, Ill.; C. F. Sager, Chillicothe, Ill.; and E. J. McCormick, Chicago, Ill. Of the thirty-two guesses all were from Illinois but two. One was from E. L. Walrath, Arcadia, Florida, and the other from C. F. Dalrymple, Dayton, New York. And every guess was right but Mr. Dalrymple's. He mistook Mr. Kildow for E. R. Root, Medina, Ohio.

Low Prices Stimulate Consumption

By Mrs. Benj. Nielson
Nebraska

We have read with much interest articles published in the low price discussions. As a deputy bee inspector for the last three years, my husband has had ample opportunity to observe and know conditions prevailing and to ascertain sentiment regarding attitudes concerning the future of honey.

Ordinarily, we would deplore the low prices of the recent years. But these have not been ordinary times. Numerous small beekeepers have failed to give even one super to their bees, disgustedly pointing out that it pays so little. He fails to reason though, that comparatively little else pays much either. A number of larger producers have sadly neglected their bees, become discouraged, and some have come to us desirous of selling. Upon investigation such yards prove to be of little value.

It is the level-headed alert beekeeper who has sought a way out of his difficulties, instead of spending his time in complaining, keeping his yards in good condition, ready to forge ahead when times are better as they are bound to be. If he has carefully learned how to cut production costs he will have gleaned a lesson from these times well worth the price.

Through these low prices many people have consumed more honey, per capita, than for many years. We have raised our prices and demand continues to be very good. Why shouldn't honey share in advanced prices? Take heart discouraged keeper of the bees!

And have you noticed that scarcely a paper or publication one picks up but has some mention of honey or a honey recipe? The Honey Institute is responsible for much of this. It has been said with authority that people do not buy honey simply because they never think of it. Take advantage of the publicity honey is being given and do your share.

Instead of being discouraged by recent low prices we feel they will prove a decided blessing. Perhaps honey has become a habit and surely, day by day, people are being enlightened as to its healthful qualities. Now we must continue to give the public a good product, well-handled and attractive in appearance to continue the good work done thus far.

Unusually large advertisements are being sponsored by the corn sugar faction in many leading publications. Is it, perhaps, because honey is coming more to the front and is furnishing plenty of competition? It is something to think about and adds zest to our game.

Methods for Determining the Weight Per Gallon of Honey

By George E. Marvin, Assistant Apiculturist
Bureau of Entomology, U. S. Department of Agriculture

THE marketing of honey is not so simple a matter as it was a few years ago, as the present-day consumer demands a product of higher quality and put up in a more attractive form than did his predecessor. Other characteristics besides flavor must now be given consideration by the producer. Weight per gallon, for example, is becoming an important factor in sales success. Heretofore beekeepers have not been much concerned about this characteristic of honey, and, as a matter of fact, the average apiary has not had the equipment necessary for making accurate determinations of weight per gallon. Unquestionably, more attention will have to be given to this factor in the future.

For instance, those who wish to take advantage of the prestige and the advertising values that attach to a product which carries a United States grading stamp will want to make sure that their honey weighs not less than 11.75 pounds per gallon—one of the requirements in the revised standards for United States grades (1). Also, the use of honey in manufactured goods has created buyers who are more exacting in their demands as to water content, etc., since they use the honey according to a definite formula. In addition, if one is certain that his product weighs more than 11.75 pounds per gallon, he is sure that the honey is well ripened and should not, under normal conditions, ferment readily. It should, of course, be kept in mind that if yeasts are present and certain other conditions prevail a honey will sour even though it weighs more than the minimum.

In the course of the work incidental to the recent revision of the United States honey grading circular, determinations were made of the weight per gallon of honeys from all parts of the United States. A considerable variation was found in the weight of these honeys and many good honeys were found to weigh less than 12 pounds per gallon, which had previously been considered the minimum for a well-ripened honey. In the revised United States standards, therefore, the minimum weight requirement has been placed at 11.75 pounds (11 lbs. 12 oz.) per gallon of 231 cubic inches at 68° F. (20° C.).

The weight per gallon of honey can be determined in several ways. Probably the simplest method is the direct weighing of a known volume of the honey. A Brix hydrometer can also be conveniently used, but because honey is usually too dense at ordinary temperatures for readings to be obtained directly it must first be heated or diluted. The weight per gallon equivalent to the Brix reading is obtained from a table. Another method involves the determination of the refractive index of the honey and finding the equivalent weight per gallon from a table. The procedures to be followed by each of these methods will be described.

Direct Weighing

This method involves the use of a balance and a standard container (2). Weigh the container, fill it with honey, and weigh again. The weight per gallon can then be calculated by multiplying the net weight of the honey (the difference between the weight of the measure and the weight of the measure filled with honey) by the number of units (of the measure used) it takes to make a gallon.

For example, if a standard pint measure is used and the net weight of the honey is 23.84 ounces, a gallon of such honey would weigh 8x23.84 equals 190.72 ounces, or 11.92 pounds. The same result may be obtained by simply dividing the number of ounces per pint by 2. If a standard gill measure is used and the net weight of the honey is 5.96 ounces, a gallon of such honey would weigh 32x5.96 equals 190.72 ounces, or 11.92 pounds. When a gill measure is used, the same result may be obtained by multiplying the number of ounces per gill by 2.

When metric weights are used, a simplified method of determining pounds per gallon is to multiply the net weight, in grams, of a pint of honey by 0.01763. Thus, 676 grams (weight of 1 pint) x0.01763 equals 11.92 pounds per gallon. If the gill measure is used, multiply the net weight in grams by 0.07054. Thus, 169 grams (weight of 1 gill) x0.07054 equals 11.92 pounds per gallon.

Table 1.—How to Make Temperature Corrections When Using the Brix Heating Method.

Temperature		Add to observed Brix reading	Temperature		Add to observed Brix reading
°C.	°F.	Degrees	°C.	°F.	Degrees
30	86	0.81	53	127.4	2.79
31	87.8	0.89	54	129.2	2.88
32	89.6	0.97	55	131.0	2.97
33	91.4	1.06	56	132.8	3.06
34	93.2	1.14	57	134.6	3.15
35	95.0	1.22	58	136.4	3.25
36	96.8	1.31	59	138.2	3.34
37	98.6	1.39	60	140.0	3.43
38	100.4	1.48	61	141.8	3.52
39	102.2	1.56	62	143.6	3.62
40	104.0	1.65	63	145.4	3.71
41	105.8	1.74	64	147.2	3.81
42	107.6	1.82	65	149.0	3.90
43	109.4	1.91	66	150.8	4.00
44	111.2	1.99	67	152.6	4.10
45	113.0	2.08	68	154.4	4.20
46	114.8	2.17	69	156.2	4.30
47	116.6	2.26	70	158.0	4.40
48	118.4	2.34	71	159.8	4.52
49	120.2	2.43	72	161.6	4.64
50	122.0	2.52	73	163.4	4.76
51	123.8	2.61	74	165.2	4.88
52	125.6	2.70	75	167.0	5.00

The Brix Heating Method

For this method a Brix hydrometer reading from 75° to 85° (3), a glass cylinder, and a mercury thermometer (4) are required. A Brix hydrometer is an instrument used for determining the percentage of sugar in a sugar solution. The glass cylinder should be at least 10 inches high and of sufficient diameter to permit the hydrometer to come to rest without touching the sides.

Liquid honey must be used. Heat the honey to 40-75° C. (100.4-167° F.) and place a well-mixed sample in the glass cylinder. Immerse the cylinder containing the honey in a water bath of the same temperature as the honey, taking care that the honey is at the same level as the water in the bath. Lower the hydrometer in the honey, allow it to remain for about 15 minutes, and then take the reading, at the same time noting the temperature. Correct the reading to the standard temperature of 20° C. or 68° F. by means of Table 1 (5), and obtain the equivalent weight per gallon from Table 2 (6).

Table 2.—Refractometer and Brix Readings With Equivalent Weights Per Gallon of Honey at 68° F. (20° C.).

Refractive index	Brix reading	Pounds per gallon	Refractive index	Brix reading	Pounds per gallon	Refractive index	Brix reading	Pounds per gallon
1.4799	76.0	11.554	1.4886	79.4	11.739	1.4975	82.8	11.929
1.4802	76.1	11.559	1.4888	79.5	11.745	1.4978	82.9	11.934
1.4804	76.2	11.565	1.4891	79.6	11.751	1.4980	83.0	11.940
1.4807	76.3	11.570	1.4893	79.7	11.756	1.4983	83.1	11.946
1.4810	76.4	11.576	1.4896	79.8	11.762	1.4985	83.2	11.951
1.4812	76.5	11.581	1.4898	79.9	11.767	1.4988	83.3	11.957
1.4815	76.6	11.586	1.4901	80.0	11.773	1.4991	83.4	11.963
1.4817	76.7	11.592	1.4904	80.1	11.779			
1.4820	76.8	11.597	1.4906	80.2	11.784	1.4993	83.5	11.969
1.4822	76.9	11.603	1.4909	80.3	11.789	1.4996	83.6	11.974
1.4825	77.0	11.608	1.4912	80.4	11.795	1.4999	83.7	11.980
1.4827	77.1	11.613	1.4914	80.5	11.801	1.5001	83.8	11.986
1.4830	77.2	11.619	1.4917	80.6	11.806	1.5004	83.9	11.991
1.4832	77.3	11.625	1.4919	80.7	11.811	1.5007	84.0	11.997
1.4835	77.4	11.630	1.4922	80.8	11.817	1.5009	84.1	12.003
1.4838	77.5	11.635	1.4925	80.9	11.823	1.5012	84.2	12.008
1.4840	77.6	11.641	1.4927	81.0	11.828	1.5015	84.3	12.014
1.4843	77.7	11.647	1.4930	81.1	11.834	1.5017	84.4	12.020
1.4845	77.8	11.652	1.4933	81.2	11.839	1.5020	84.5	12.025
1.4848	77.9	11.657	1.4935	81.3	11.845	1.5022	84.6	12.031
1.4850	78.0	11.663	1.4938	81.4	11.850	1.5025	84.7	12.037
1.4853	78.1	11.668	1.4941	81.5	11.856	1.5028	84.8	12.043
1.4855	78.2	11.674	1.4943	81.6	11.862	1.5030	84.9	12.048
1.4858	78.3	11.679	1.4946	81.7	11.867	1.5033	85.0	12.054
1.4860	78.4	11.685	1.4949	81.8	11.873	1.5036	85.1	12.060
1.4863	78.5	11.690	1.4951	81.9	11.878	1.5038	85.2	12.065
1.4865	78.6	11.695	1.4954	82.0	11.884	1.5041	85.3	12.071
1.4868	78.7	11.701	1.4956	82.1	11.890	1.5043	85.4	12.077
1.4871	78.8	11.706	1.4959	82.2	11.895	1.5046	85.5	12.083
1.4873	78.9	11.712	1.4962	82.3	11.901	1.5048	85.6	12.088
1.4876	79.0	11.717	1.4964	82.4	11.906	1.5051	85.7	12.094
1.4878	79.1	11.723	1.4967	82.5	11.912	1.5053	85.8	12.100
1.4881	79.2	11.728	1.4970	82.6	11.918	1.5056	85.9	12.105
1.4883	79.3	11.734	1.4972	82.7	11.923	1.5058	86.0	12.111

The Brix Dilution Method

For this method a balance is required in addition to the apparatus used in the Brix heating method. A Brix hydrometer graduated from 40° to 50° will be adequate for most honeys, but for those that are barely above the minimum requirement in weight one graduated from 30° to 40° will be needed.

If the honey is granulated, it should be liquefied at 60° C. (140° F.) and cooled before determination is made.

Pour a sample of honey into the mixer and weigh. Add an equal weight of water, mix thoroughly, and pour into the glass cylinder. After most of the air bubbles have come to the top and have been skimmed off, gently lower the hydrometer into the solution until it floats. Read the hydrometer scale, note the temperature and correct the reading to the standard temperature by means of Table 3. As equal parts of honey and water **by weight** were taken, the calculated Brix readings of the undiluted honey may be determined by multiplying the observed reading of the solution by 2. The equivalent weight per gallon can be obtained from Table 2.

For example, let us suppose that the observed Brix reading of a honey solution at 63° F. is 41.50°. According to the temperature-correction table, 0.20 must be subtracted from this observed reading, making a corrected reading of 41.3°. Multiplying this by 2 gives a calculated reading of 82.6° for the undiluted honey, the equivalent weight per gallon of which is 11.92 pounds.

Refractometer Method

The refractometer is a precision instrument used for measuring the refractive index of honey, sugar solutions, and many other materials. It consists primarily of a telescope, 2 prisms of flint glass, and a compensating prism. Water is circulated through the prisms to keep them at 68° F. (20° C.), for if other temperatures are used corrections must be made. The double prisms are opened and a few drops of honey are put on them with a glass stirring rod.

The method of measurement is based upon the observation of the position of the border line of total reflection in relation to the faces of the prism of flint glass. This border line is brought into the field of the telescope by rotating the double prism until the field of vision is divided into a light and dark portion. The line dividing these portions is the border line and as a rule will appear as a band of color, but if the compensator is rotated the colors disappear and a sharp line is obtained. The border line should be so adjusted that it falls on the intersection of the cross hairs, after which the refractive index of the honey is read directly on the scale of the sector. From the refractive index one can obtain the weight per gallon of the honey from Table 2 (7).

The refractometer is quite expensive (8) and therefore the use of this method in the honey house is impracticable. It should be possible, however, to have the refractive index of a sample of honey determined by any well-equipped laboratory.

Comparison of Results By Different Methods

Three of the methods described above were tried on 38 commercial honeys, with the results shown in Table 4. In comparing the results by the three methods, it will be seen that the calculated weight by the refractometer method was in almost every case a little higher than the weight obtained by direct weighing, and that by the Brix dilution method it was still higher.

(1) United States Grades, Color Standards, and Packing Requirements for Honey. U. S. Dept. Agr. Circ. 24 (rev.), 29 p. 1933.

(2) A container the exact capacity of which is known. Standard measures of this kind are expensive (approximately $5.00 to $12.50 for a gill measure) and are usually obtainable only from dealers in scientific supplies. In lieu of a standard measure, a pint or gill receptacle could be sent to either the local or the State sealer of weights and measures to have the capacity accurately determined. If it should be more or less than the standard measure, this difference would

Table 3.—How to Make Temperature Corrections When Using the Brix Dilution Method.

Temperature		Subtract from observed Brix reading	Temperature		Add to observed Brix reading
°F.	°C.	Degree	°F.	°C.	Degree
	17	0.21	69		0.04
63		0.20		21	0.07
64		0.15	70		0.08
	18	0.14	71		0.12
65		0.12		22	0.15
66		0.08	72		0.16
	19	0.07	73		0.20
67		0.04		23	0.22
			74		0.24
68	20	No correction necessary	75		0.28
				24	0.30
			76		0.31
			77	25	0.38
			78		0.41
				26	0.46
			79		0.47
			80		0.51
				27	0.54
			81		0.55
			82		0.59
				28	0.61
			83		0.62
			84		0.66
				29	0.70
			85		0.71
			86	30	0.78

Table 4.—Weights Per Gallon of 38 Commercial Honeys As Determined By Direct Weighing, the Brix Dilution Method, and the Refractometer Method.

Laboratory number of honey	Predominating floral source	Producing area	Weight per gallon as determined by Direct weighing Pounds	Brix dilution Pounds	Refractometer Pounds
987	Mixture	Minnesota	11.887	12.00	11.890
998	Mixture	Utah	11.852	11.96	11.862
1093	Star thistle	California	11.880	11.95	11.895
1094	Gallberry	South Carolina	11.824	11.88	11.828
1095	Blend	Louisiana	11.781	11.85	11.789
1097	Catclaw	Arizona	11.922	12.04	11.929
1098	White clover	Louisiana	11.824	11.90	11.839
1099	Tupelo	Louisiana	11.767	11.85	11.779
1113	Peppervine	Louisiana	11.697	11.79	11.706
1120	Litchi	China	11.640	11.73	11.652
1121	Goldenrod	Louisiana	11.760	11.83	11.762
1130	Fireweed	Oregon	11.911	11.97	11.901
1131	Star thistle	California	11.909	11.95	11.895
1132	Mixture	Michigan	11.943	12.01	11.946
1133	Sourwood	Virginia	11.816	11.88	11.795
1134	Sumac	Connecticut	11.816	11.86	11.795
1135	Goldenrod	Ohio	11.802	11.92	11.779
1139	Alfalfa	Nevada	11.990	12.03	11.963
1141	Sweetclover-alfalfa	Wyoming	11.972	12.07	11.997
1152	Alfalfa-sweetclover	Montana	11.937	12.04	11.957
1153	Sweetclover	Colorado	11.881	11.96	11.906
1160	White clover	Ohio	11.781	11.86	11.817
1165	Mixture	Louisiana	11.746	11.83	11.751
1166	Mixture	Louisiana	11.711	11.79	11.723
1168	Mixture	Louisiana	11.760	11.85	11.789
1187	Goldenrod	Louisiana	11.689	11.77	11.695
1188	Part honeydew	Wisconsin	11.816	11.90	11.828
1194	Sage	California	11.831	11.91	11.845
1198	Blend	Missouri	11.802	11.89	11.817
1201	Eriogonum	California	11.943	12.01	11.957
1202	Creosotebush	California	11.887	11.99	11.915
1203	Athel	California	11.902	11.97	11.934
1207	Tupelo	Florida	11.802	11.87	11.828
1210	Buckeye	California	11.852	11.92	11.839
1211	Tulip poplar	Maryland	11.831	11.89	11.845
1212	Locust-tulip poplar	Maryland	11.852	11.91	11.856
1213	White clover	Ohio	11.781	11.88	11.795
1214	Sweetclover	Wyoming	11.993	12.05	11.986

have to be taken into consideration in making calculations. The checking of standardized weights and measures by local or State officials is usually done free of charge or at a minimum cost.

(3) A Brix hydrometer standardized at 20° C. (68° F.) is obtainable from dealers in scientific supplies for $1.50 to $2.00.

(4) The kind sold by dealers in scientific supplies for about $1.00.

(5) The working portions given in Tables 1 and 3 have been taken from the 80 and the 40 per cent sugar readings, respectively, in Table 11 in U. S. Bur. Standards Circ. 44, 2nd ed. (1918), Polarimetry.

(6) The weights per gallon equivalent to the Brix readings are based on those given in Table 1 in U. S. Bur. Standards Circ. 375 (1929), Weights per United States Gallon and Weights per Cubic Foot of Sugar Solutions. For convenience the table has been expanded by C. F. Snyder and L. D. Hammond, of the Bureau of Standards, to show intervals of 0.1° Brix.

(7) The refractive indices given in Table 2 are taken from Table 17 in U. S. Bur. Standards Circ. 44, 2nd ed. (1918), Polarimetry.

(8) A refractometer costs about $210.

Higher Honey Prices --Who Will Start the Upward Trend?

By W. P. Southworth
Iowa

When the price of honey was comparatively high and the demand good a beekeeper who numbered his colonies of bees by the hundreds stated emphatically that the commercial honey producer could place honey on the market at 5c per pound and make a profit. The buying public has taken that statement literally, and to mean 5c per pound at retail.

The great experiment of low prices for agricultural products has been tried and millions of people besides the farmers are impoverished, and some of our financiers are saying that conditions could not be worse, be that as it may I am wondering how we are to reverse the motion and start the honey industry on the up grade, when the beekeepers themselves have been responsible for lowering prices when conditions were normal.

The beekeepers fix the retail price of honey in their localities to a large extent, therefore who is going to offer more for a commodity than the minimum price that it can be bought for?

S. F. Haxton in his article "Experiences in the Sale of Honey" in the January issue of the American Bee Journal has given some facts that I at one time had a desire to publish but felt that it would not be beneficial to do so, because the low priced honey salesman does not read the journals as a rule, but since Mr. Haxton has spoken out-loud, it is in order for others to reinforce what he has stated.

I have been interested in honey production and marketing for a good many years, and have observed that beekeepers who retailed their product at low prices did not make progress, because their earnings would **not permit** them to buy more bees and fixtures, and they could not expand in sales work, because they could not buy honey and retail it profitably at the low prices that they had established.

As a rule the man who produces honey enough to make his season's production worth while does not have time to market his product at retail, and but few have the proper equipment to place extracted honey in suitable condition for the retail trade, therefore honey production is one line of endeavor and marketing is another and we need our honey concentrating and marketing plants.

This is being written from the storm center of the "farmers' revolution" and at a time when the feeling is tense and people are quiet and stern. I sense that the feeling of the farmer toward the middle man has changed, the farmer does not want to eliminate the middle man, or speculation, but he does want cost of production for the commodities that he produces and he wants to see other people prosper.

The farmer and the beekeeper do not keep much of the money that they receive in exchange for their products. This statement is not made in any spirit of depreciation of any class of people, because none of us retain much of the money that we receive, but to us it represents stored up energy that will provide the necessities of life, expansion in business and some luxuries, and luxuries indicate prosperity.

Revised Edition of "U. S. Grades, Color Standards, and Packing Requirements"

We are in receipt of a copy of the revised edition of circular 24. "United States Grades, Color Standards, and Packing Requirements for Honey" with a color chart giving the color standards for grades of comb honey. Both the circular and the chart are available from the Superintendent of Documents, Government Printing Office, Washington, D. C., at five cents for the chart and five cents for the circular. The color chart is required only in the grading of comb honey.

More and more the carefully established grades by the Federal Government are being accepted wherever standardized quality honey is required. These grades and color standards and packing requirements recommended by the United States Department of Agriculture represent much work and painstaking effort to determine the most desirable marketing requirements for every section of the United States. The government grades for all honey should be used wherever standard, quality packs are desired. Copy of the circular and chart may be obtained at the above address at little cost.

A Cat With Good Sense

We have a pet black cat that enjoys strained honey and actually meows for it.

Elmer Carroll,
Carroll Apiaries,
Michigan.

A Practical Bee-man of the Old School

By Walter H. Hull
Virginia

IT is well now and then to turn back a page or two of history and take a glimpse of the past. Only so can we correctly judge the merits of the present. But it is not often that we can step back and see the past in concrete actuality, as was my privilege in a recent visit to Mr. F. G. Bass, of Front Royal, Va.

Not that Mr. Bass is in any sense of the word behind the times. He has been in this game 49 years and is a thoroughly up-to-date, practical beekeeper, despite the fact that he will be eighty years of age next spring. But, perhaps because he is a practical man, he has not been in a hurry to forget the older ways nor, specifically, to discard the older equipment. I was particularly struck by this fact because I know some younger members of the craft, not exempting myself, who are inclined to feel hurt if everything they use is not brand new and of the latest conceivable pattern. Perfect equipment is an excellent ideal to work for but not always possible of attainment and it may be definitely pernicious if allowed to cut into one's morale. Mr. Bass and his two sons operate 1400 colonies in the territory formerly occupied by Capt. J. E. Hetherington. He not only knew Hetherington well; he bought the greater part of Hetherington's bees and equipment when the Captain moved to richer pastures in the West. And he still has a considerable part of this equipment in actual service.

One of the things he still uses, and swears by, is the Hetherington frame. On what basis this frame was rejected by the trade in favor of the Hoffman I do not know. The question was decided so long before my time that I had never even seen one of these frames.

The frame has a small casting on each of its four corners, which castings space the frames the correct distance apart and also give them the correct end spacing at both top and bottom. There are no other projections on the frames. No rabbets have to be cut out of the end boards of the hive for them to rest on. It is impossible for the bees to glue them fast; and by removing about three frames at one side the rest can be leaved over like the leaves of a book, permitting examination of both sides of the combs without removing the frames. Mr. Bass assured me that one man could go through 100 hives in a day in this manner, whereas about 60 would be his limit if he had to remove all the frames to examine them. The frames are also reversible, which has certain well known advantages.

The only weakness that I saw was that the weight of all the frames rests on small cleats at the bottom of the hive, and it may have been this feature that caused the Hetherington frame and hive to be rejected as standard by the beekeeping fraternity.

This section of the country occupied by Mr. Bass and his sons is no bee paradise. Their crop this year (1932) from 1400 hives was about 50,000 pounds of section honey — a fair average, I should say, for commercial apiaries throughout the state. Virginia beekeepers are not in the step ladder class. No doubt Hetherington made a wise move, financially, when he turned westward, though Virginia has compensations that are not to be overlooked.

I was interested in the bottom boards that Mr. Bass uses. His hives have bee space below the frames, so that any flat surface will serve as a bottom. At one time he used concrete blocks about two feet square made with cinders. These, while indestructible, do not stay in position very well and require a great deal of leveling each spring. He now uses a combined hive stand and bottom board consisting of two 4-foot 2 by 4's, creosoted, and decked over at each end with boards for a space wide enough for the hive, thus allowing for a hive on each end of the stand with an open space between. These double stands do not slide out of position and require very little leveling once they have been properly set.

Mr. Bass showing one of the old Hetherington frames, which he prefers to the Hoffman. Note the projections at the bottom of the frame, as well as at the top, which makes it reversible.

F. G. Bass, of Front Royal, Va., and some of his crew. Left to right: Grafton Warren, Chester A. Bass, Henry Thorpe and F. G. Bass.

Hives in the outyards are examined each week during the swarming season and given whatever treatment the conditions indicate. Mr. Bass no longer visits the outyards, having turned this work over to his sons, but the home yard, consisting of 150 colonies, he has reserved for himself.

"We believe in shaking," he said, as we walked among the bees. "We don't fool with them, nor let them fool around doing nothing. When a colony is found loafing or trying to swarm we shake them and put them to work. But," he added, "here in the home yard I do let them swarm more or less. It's easier." And he showed me his chair in the shade of the house where he sits and watches for swarms to come out.

Here again, it seemed to me, he demonstrated his practical good sense in choosing this eminently fitting and practical way for a beekeeper to spend the afternoon years of his life.

National Honey Week

National Honey Week is November 13-18. The American Honey Institute has established many contacts and we are to have the cooperation of many important concerns. Several national advertisers will devote a portion of their radio broadcasts to honey and many publications will give it notice.

The measure of success of the undertaking, however, rests with the beekeepers. In localities where there is good local support the public will give most attention. If the housewife hears honey mentioned over the radio, she will be in a receptive mood when she goes to her grocer to provide for her table. Stories in local newspapers and displays in local stores must be provided by the beekeepers. There are many things which the wide awake beeman can do to follow up the national recognition. To do so will make it possible to turn the publicity to personal advantage and increase the sales of his product.

Is Man As Wise As His Bees?

When we consider what a mess man has made of his world, we cannot but wonder whether he is not assuming a good deal when he claims to be lord of the earth for whom all the rest was created.

We never hear of the bees suffering because of a surplus of honey. If a colony has several full supers they will work just as industriously to fill another. The larger their surplus the greater their measure of security. Just how mankind can prosper by plowing under his cotton and killing his surplus pigs is hard to understand. If we can find a way to secure proper distribution of the products there will be no surplus. In the hive every bee takes according to her needs and there is no hoarding by one individual while another suffers from want. Man still has a long way to go before he learns how to manage his affairs as well as the bees.

It is reported that the past season has resulted in the smallest total of farm crops in forty years. We know that in many sections the honey crop was unusually short. Now we are faced with the possibility of such insect plagues as chinch bugs and grasshoppers as we have seldom seen. With weather conditions favorable to the insects next season's crops may well be so short as to leave the country in actual need of the surplus which we are now destroying. Human history is full of blind blundering and we cannot but wonder what the world of a hundred years hence will think of our present day efforts.

Those Codes

We appear to have reached a critical period in the history of the world. Our system of distribution has broken down and although we have facilities for ample production of goods to meet the world's needs we are no longer able to make a satisfactory exchange of what we have for what we want. This comes as a result of the enormous burden of debt piled up to prosecute the war and the era of extravagance which followed.

The codes are offered in an effort to remove abuses which are common to industry and trade. They also seek to equalize opportunity and give everybody an equal chance. The manufacturer who pays high wages for short hours of labor must of necessity get a higher price than his competitor who pays lower wages. The codes can only succeed by means of general cooperation.

Already much benefit is apparent from the effort. Release of children from long hours of labor, disappearance of the sweat shop and less disastrous price cutting may be mentioned.

On the other hand cases of serious injustice are coming to light where the small business man is unable to meet the standard set and continue to do business. Some adjustment must be made to avoid crushing those who deserve to survive.

Permanent success is only possible through a universal spirit of cooperation and good will. If a spirit of fairness prevails much good should come and the underprivileged should find their place in the sun.

What a code can do for the beekeeper is problematical. A very large portion of the honey is produced by sideliners who depend principally upon other business. In many localities such persons set the price and the commercial producer is compelled to follow. It would appear to be very difficult to enforce a code with such small producers. See page 442 for honey code.

Our Ancient Craft

We beekeepers may well take pride in the fact that we are followers of a very ancient craft. Centuries before many of our present day agricultural crops were known to the white race, beekeeping was followed as a serious undertaking. Pliny, the Roman naturalist who lived and wrote about nineteen hundred years ago tells of those who made bees an exclusive study. He records the fact that Aristomachus of Soli did nothing else for a period of fifty-eight years. Philiscus of Thasos passed his life in desert spots tending swarms of bees. Both are said to have written books about bees.

According to those who have delved into musty volumes of old writings, no less than six hundred ancient philosophers gave themselves rather seriously to a study of bees and hundreds of volumes of discussion of bees and beekeeping by these ancient masters have unfortunately been lost.

After thousands of years of intensive study new facts still come to light and better methods of management continue to develop. It seems that we never come to the end of possible advance with any worth while calling.

A Bit of History

Fifty years ago, Dr. Dzierzon, the great German beemaster wrote in the preface of the revised edition of his well known book, "Rational Beekeeping," as follows: "We have further been successful in discovering the nature and cause of foulbrood, the greatest terror of beekeepers, and almost simultaneously, have discovered an infallible cure for it in salicylic acid; and, lastly, we have ascertained that sugared milk and eggs form a harmless substitute for the natural food of bees, and are a powerful means of promoting breeding."

It is interesting to speculate on the number of cures for foulbrood which have been discovered since that time. It is equally interesting to speculate on the number which will still be made before the real remedy for this disease is discovered.

One wonders a bit concerning the announcement of an infallible cure for foulbrood when further on in the same book he reads: "Foulbrood is of two kinds. There is one kind that is mild and curable, and another kind malignant and incurable; both kinds are, however, contagious."

Brood Rearing Out of Season

Observant beekeepers long ago noticed that brood rearing out of season was very exhaustive for the colony. Where brood rearing continues very late in autumn or begins early in spring the worker bees die in large numbers from exhaustion. For this reason beekeepers endeavor to close the season with hives full of honey and

with large clusters of young bees. Weak colonies will endeavor to improve their condition by brood rearing out of season and thus make a bad condition worse. Present day practice requires vigorous queens at the head of all colonies to insure ample breeding in late summer. Such colonies are likely to enter winter with good prospects.

Honey Recipes

There is much complaint of the failure of honey recipes to come up to expectations. This is due in part to the variation in honey from different sources. Dr. Tracy and his associates when working with honey in ice cream at Illinois Experiment Station found a great variation in results with different kinds of honey. Some honey apparently is unsuited for use in the making of ice cream.

A report has recently come to us of the failure of a special recipe which the user had found very successful with a different kind of honey. It thus becomes very important that when honey is recommended for certain uses that the particular kind of honey be made known. When one tries a new recipe for the first time and makes a failure it is likely to result in an unfavorable reaction which will prevent another trial.

This opens a new field for research. Institutions which work with honey should try honey from several sources and report results from each. A housewife may find sweet clover well suited to a particular purpose and recommend it. Another finding honey required in the recipe may get buckwheat honey which in turn might not be at all suited for the particular purpose. Thus a possible enthusiast for our product may be permanently lost.

Although the oldest sweet known, probably less is known about the use of honey in combination with other food products than is true of any other sweet available in commercial channels. It is highly important to the industry that the facts be made known.

Immunity in Bees

Little has been heard of late concerning the strains of bees which show some degree of immunity to disease. European foulbrood was quickly conquered by the distribution of resistant queens and for a time there was evidence of some interest in seeking similar resistance to other diseases. Several beekeepers have reported colonies which showed resistance to American foulbrood also. A well directed effort in that direction offers a real opportunity for some student interested in making an outstanding contribution to the beekeeping industry.

Another Sweet Clover

The search for new forage crops is developing undreamed of possibilities for the beekeeper. The interest in sweet clover has already provided such bee pasture as our fathers never dreamed possible. The lastest is the Redfield yellow sweet clover which blooms late in the season and which is said to make the best hay of any except the Alpha sweet clover recently discussed in our columns. The Redfield sweet clover is of special interest to the beekeeper because of its late blooming, thus extending the honeyflow much beyond the time available through the common white bloom. This new variety was developed in South Dakota and is said to be especially well adapted to the Plains Regions from Kansas northward. Reports indicate that it does not succeed so well in the eastern States. With a combination of the early white or Grundy County, the early yellow, and common white and now the Redfield Yellow sweet clovers, it is possible to enjoy a very long blooming season and a honeyflow which makes beekeeping seem like a bonanza. The Redfield sweet clover originally came from Manchuria and is named for the South Dakota town where it was tested as to its adaptability. Since it blooms after the common white it serves to greatly extend the season.

It is probable that much of the superiority of sweet clover over other honey plants is due to its longer period of bloom. With the addition of new varieties flowering earlier and later we find a constant lengthening of the honeyflow much to the advantage of the beekeepers in regions where the plants are extensively grown.

Clarifying Honey

We feel that the articles on clarification of honey by Lothrop and Paine which have appeared in this magazine are of more than passing interest. The one appearing in the August issue is especially interesting because it sets at rest the question as to whether clarification might remove something essential to our product.

If clarification removes only impurities it is greatly to the advantage of the producer as well as the consumer. If all waste matter can be removed from honey by this process, leaving a clear product with less tendency to granulation, many of the problems of the packer will be removed.

We regard this work by these men as of the kind of service which the industry greatly needs. We are pleased to note that investigation will be continued in the hope of finding a definite procedure which is cheap and practical. If they are successful as we hope them to be, we may expect a definite improvement in the honey market as a result.

There can be no question but that the poor appearance of much of the honey in the market greatly restricts the sales

Brood Poisoning of Bees

In the August issue of Gleanings is an article by Burnside and Foster regarding the brood poisoning of bees in the South. Apparently they are dealing with the same trouble which was described in this Journal more than fifty years ago by Dr. Brown of Georgia. He ascribed the cause of the difficulty to the Yellow Jessamine. (Gelsemium sempervirens). Since the time of the occurrence of the malady as described by these authors is at the blooming time of that plant it seems likely that this may be the cause.

Quotations from Dr. Brown and also from the late T. W. Livingstone regarding what appears to be the same trouble may be found in Pellett's American Honey Plants in connection with the article on Yellow Jessamine.

There can no longer be any question but that the bees do at times harvest poisonous honey. Vansell proved the case for buckeye from California and there have been numerous discussions of the effects of poisonous honey gathered from azalea. In recent years but little has been heard of such effects from yellow jessamine but in the files of the bee magazines of the seventies and eighties numerous references may be found to it.

Changing Pastures

We have numerous reports to the effect that localities formerly providing good bee pasture are no longer safe for the honey producer. Some Dakota neighborhoods where a few years ago sweet clover was raised in large acreage for seed now plow it under for soiling and the bees find no pasture. It seems that there is no such thing as a permanent bee pasture as changing conditions bring in pasture where none has been before and destroy it where it has been good.

Radio Possibilities

The radio has become a very important means of reaching the public either with information or advertising. Beekeepers are profiting along with others in this new medium. The University of Nebraska gave a radio period to honey drinks and honey dishes for hot weather. Many housewives look to their favorite stations for recipes for new dishes and always keep pencil and paper ready to jot down the things that interest them. Beekeepers are fortunate in the help of state institutions since they have no large fund for such activities.

Happy Good Wishes

It is a pleasure to receive congratulatory postal cards from beekeepers at conventions. Our editor acknowledges one from the Hautes Alpes just received and bearing the names of 14 beekeepers in attendance at the meeting. Thanks, friends, and be sure that your reminders are always welcome.

Helping Honey Help Itself

By Natt N. Dodge
Washington

FOR the majority of agriculturists, beekeepers included, the Law of Supply and Demand has taken on new significance during the last few years. To put this law to work for them, beekeepers must increase the consumption of honey to a point at which the stimulated demand will absorb all of the excess production.

A great many suggestions for increasing honey consumption have been advanced during the last year or two, but, apparently, the industrial depression has more than offset the efforts to make the public actively "honey conscious," while the new German tariff has been a powerful influence in preventing the exportation of a portion of America's surplus honey.

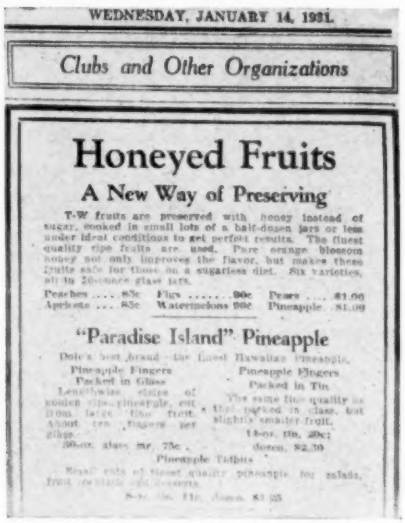
A survey conducted among the rural population in one county in Colorado brought out the startling fact that farmers were consuming the bulk of olemargarine used in the county. Strange as it may seem, the very dairymen who were complaining about the low price of butter fat were helping to keep the price low by selling all of their cream and buying butter substitutes for their families. What about beekeepers? What proportion of the honey producers of the United States are actively working against their own interests by using sweets other than honey to the exclusion of their own product? Undoubtedly many beekeepers are using honey for sweetening their cereals and beverages, for spreading bread and waffles, and to an increasing extent in cooking (thanks to the recipes provided by The American Honey Institute and the food departments of the beekeeping journals). But how many beekeepers' wives are canning their fruit in honey, making their jellies and jams with honey, or filling their pitchers with honey syrup? How

Honey Jelly Made Available

By GLENN H. JOSEPH

many roadside stands are increasing their incomes and at the same time building up honey consumption through the sale of honey jelly and honey-canned fruits?

The making of honey syrup is easy. No definite rules may be laid down as tastes differ, and the syrup should be made to please the palates of the family majority. There are, however, a few suggestions which may be helpful in preparing an appetizing syrup. In the first place, the honey used should be mild. Strong honeys do not make a desirable syrup. Care must be taken not to add too much water, for the resulting syrup will not keep, will be thin and "runny," and will taste "flat." For every gallon of water, four gallons of honey will make a syrup of heavy body. (By weight, use one pound of water to six pounds of honey.) The matter of flavoring rests with the user of the syrup. Maple-flavored syrups are by far the most popular with the public, according to the testimony of the buyer for a large chain store grocery system. Butterscotch and vanilla flavors are favored by many persons. That flavoring of some sort is essential to an appetizing honey syrup is agreed upon by those who have experimented with this product. The use of too much flavoring is to be guarded against. Of the concentrated flavoring extracts, one ounce of flavoring to about eight gallons of syrup is usually sufficient. A good rule to follow is to use the least amount of flavoring. In testing syrup for flavor, the test should be made with cold syrup on a waffle or griddle-cake rather than tasted from the spoon. If desired, the flavor may be improved by the addition of a small amount of brown sugar and a pinch of salt to the gallon of syrup. For immediate use, melt into one pint of honey syrup about one quarter pound of butter, stirring briskly. Serve hot.


WEDNESDAY, JANUARY 14, 1931.

Clubs and Other Organizations

Honeyed Fruits

A New Way of Preserving

"Paradise Island" Pineapple

Unless honey syrup is to be used within a week or two, it should be packed at about 170 degrees Farenheit, and the containers immediately sealed.

To the writer's knowledge, honey syrup has not yet been successfully marketed in volume. There are several reasons which contribute to the failure of attempts to commercialize this product. In the first place, the public is not yet sufficiently sold on honey as a commodity to be interested in a honey syrup. In other words, if people want syrup they buy syrup, if they desire honey they buy honey. Honey syrup is considered a sort of a hybrid whose qualities, being unknown, are questionable. A few persons who are thoroughly educated to the health values of honey will appreciate the convenience and desirability of a syrup which has the many healthful properties of honey. Honey syrup cannot be placed on the market as cheaply as artificially flavored sugar or corn syrups, and it does not compare in flavor quality with true maple syrup. People who are willing to pay the higher price, prefer the real maple. Honey syrup is sweeter than sugar syrup, and has been criticized on that account. People get "fed up" on it too quickly. The solution to this problem is one which will not appeal to the patriotic honey producer, for it entails the admixture of a material of lower sweetening power, corn syrup.

However, the packing of a syrup composed of honey, corn syrup, and a flavoring extract without any attempt to capitalize on the honey content would enable the packer to compete on a price level with popular syrups on the market, would make a product of moderate sweetness, and would, if successfully merchandised, be of the greatest assistance in solving the honey industry's puzzling problem of overproduction.

There is no reason why beekeepers' wives who make their own jellies and jams should not use honey as the sweetening element. With the development of commercial fruit pectins, jelly making is no longer a difficult undertaking. Formulas have been perfected which enable the housewife to know exactly how much of each of the various ingredients to use.

Three major constituents enter into the successful making of fruit jellies; sugar, pectin, and acid. These must be present in the proper proportions in a fruit juice solution if the jelly is to "set" properly. Many fruits contain appreciable quantities of pectin, others have a relatively high acid content, still others contain both acid and pectin, while some have very little of either. The sugar content of the majority of fruits is too low to enter into calculations. This natural dissimilarity in fruit juices complicates the process of jelly making for it renders impossible the use of a single master formula for all fruit juices. Apples and currants contain sufficient pectin and acid to make a satisfactory jelly when sugar alone is added in proper amount, although the degree of ripeness of the fruit alters the quantity of these elements present. Strawberries have very little of either pectin or acid, so that both of these constituents must be added if a satisfactory jelly is to be produced. Chemical investigations have shown that the outer layers of apples and some of the citrus fruits are very high in pectin, and that this compound may be removed, purified, and made available to the housewife in a form which is very easy to use. Through the addition of a fruit or milk acid, the product need only to be added, in the proper proportions and under the proper conditions, to a syrup made of fruit juice and sugar, to form a delicious jelly.

Honey, being a simple sugar, reacts readily with pectin and acid to form jelly, and its nutritive values contribute to the healthful properties of the product. Because honey is itself a heavy sugar solution, it is in a much more concentrated form than granulated sugar. Also, since it contains from seventeen to twenty percent moisture (by weight), less fruit juice is needed to make the desirable mixture for a jelly syrup. Since home jelly making has become a common practice among farm women and many urban housewives, the greater proportion are provided with recipes for the making of fruit jellies. The manufacturers of "Certo," one of the widely distributed pectin - acid compounds, supply with each package of their product a booklet containing recipes for the making of jellies from sugar and the various fruit juices.

Provided with recipes and directions for jelly making, the housewife who desires to use honey instead of sugar need only to convert these recipes by the substitution of honey. For best results, a very mild honey and a rather high-flavored fruit juice, such as loganberry, make an excellent combination. To convert a recipe, two steps are necessary: the first converts the sugar to the necessary amount of honey; the second alters the fruit juice to conform with the moisture carried by the honey.

1. **For every cup of sugar called for in the recipe, use ¾ cup of honey.**

2. **Multiply the number of cups of honey used by 2.3. Divide the resulting figure by 8 and subtract this number from the number of cups of liquid called for in the recipe. This figure is the number of cups of liquid to be used in the honey recipe.**

3. **Use the same amount of pectin-acid compound which the recipe calls for.**

Example

Raspberry Jelly Recipe:

4 cups raspberry juice.
7½ cups sugar.
1 cup pectin-acid compound.

1. 7½ multiplied by ¾ equals 5⅝.

2. 5⅝ multiplied by 2.3 equals 12.8. Dividing 12.8 by 8 equals 1.6. Subtracting 1.6 from 4 leaves 2.4 cups of raspberry juice to be used.

The new recipe stands:

2.4 cups raspberry juice (approximately 2-1/3 cups).

5⅝ cups honey (approximately 5½ cups).

1 cup pectin-acid compound.

To insure measurements of reasonable accuracy, the honey should be warm, and the cup should be scraped fairly clear of honey before another cupful of honey is measured out. To avoid confusion and difficulties in measuring, the fractional cups resulting from the preceding conversion method may be altered to the nearest quarter or third of a cup without changing the recipe sufficiently to affect the results.

During the last year or two, manufacturers of commercial pectins have become more interested in honey as a constituent of jellies and have carried on investigational work along the lines of jelly making with honey. They are therefore prepared to be of assistance to persons desiring to manufacture such jellies. Beekeepers, especially those operating roadside stands or supplying grocery stores with whose proprietors they are well acquainted, who believe that there may be possibilities for them in the commercial manufacture of fruit jellies with honey may obtain expert information by communicating with the following:

Mr. E. W. Stewart, 40 S. Clinton St., Chicago, Illinois.

Mr. Glenn H. Joseph, Research Dep't., California Fruit Growers' Exchange, Ontario, California.

An interesting article by Mr. Joseph on the making of honey jelly appeared in the November 1930 issue of **Western Canner and Packer**, a trade journal.

Another home use for honey which, if widely adopted, would absorb a large amount of the bees' product each year, is in fruit canning. A syrup made with honey is just as suitable for preserving fruit as is one made of sugar and water. In making the syrup, the same rule as for making honey jelly may be followed satisfactorily. For the cold pack method of canning, the syrup formula given is 3 quarts (12 cups) of sugar to 2 quarts (8 cups) of water. Converted to the honey formula, this recipe is 9 cups of honey to 5½ cups of water. Honey is not only a desirable ingredient of a canning syrup, but it adds to the canned fruit a most pleasing flavor. This is especially true of canned peaches, pears, and raspberries. The fact that fruits are canned with honey gives them an added romantic appeal and health value.

From the commercial standpoint,

honey syrup, honey jellies, and fruit jellies made with honey, and fruits canned with honey offer an opportunity to the beekeeper with a roadside stand. In many of the city stores where price is the deciding competitive factor with a majority of the customers, honey-made products have, as yet, little chance for a wide sale. In some of the specialty shops or high class groceries catering to a trade that demands "something different," food products in which honey is a constituent meet with some popularity, although no great volume of business may be built up on them. At the roadside stand, where the shade of low-branched trees patterns the roadway with a carpet of shifting shadows, and where the smell of new-mown hay awakens in the city man's breast a sense of cleanliness and peace which no city atmosphere, no matter how restful, may arouse, there the word "honey" carries with it a magic sesame which will loosen the purse-strings, and the flavor of the honey-made product carries to the city table a fleeting memory of the scenes, the sounds, and the smells of the open country.

Bees Stage Political Caucus

HERE is a political problem for you. Are the bees shown in the photograph above, wet or dry? Quite apparently they have taken a very wet platform. They were snapped just as they finished congregating on a fire hydrant on a busy down town corner in San Diego recently. If you have concluded that they have decided on a wet platform and are simply waiting for the water wagon it is perhaps well to state that soon after the picture was taken they were pushed onto a very dry platform of the box shown in the photo without so much as a single stinging rebuke. The "queen bee" of this particular insect political party, it seems, took the change from the wet to the dry platform with unruffled concern and the remainder of the swarm followed her example. It might be added that there was considerable buzzing during the change however.

Norman Davidson,
California.

Death of Geo. A. Hummer

By Clay Lyle, Secretary
Miss. Beekeepers' Association

I regret very much to report the death on September 6, 1933, of Mr. Geo. A. Hummer of Prairie Point, Mississippi, President of the Mississippi Beekeepers' Association.

Mr. Hummer was born January 26, 1852 in Johnson County, Iowa, one of a family of thirteen children. In 1873 he married Miss Jennie Jones, who survives him with two of their six children. In 1882 he moved to Nebraska where he first became interested in bees. In 1892 he moved to Mississippi, bringing ten colonies of Italian bees in Langstroth hives.

So far as the writer knows, there were no modern hives or Italian bees in Mississippi at that time. Mr. Hummer also introduced sweet clover into the prairie section in which he was residing. Finding it a good locality for bees, he rapidly increased his colonies and soon shipped the first car of honey from Mississippi. He also rendered a distinct service in those early days in making bee supplies available, as he was the first Root dealer in the state. During the World War, Mr. Hummer was Extension Specialist in Beekeeping in Mississippi. In spite of his age, he took a vigorous and active part in the firm of Geo. A. Hummer & Sons until 1926, when he suffered a paralytic stroke and was forced to retire from the active management of the business.

Mr. Hummer was a man of splendid character and was greatly loved and respected by all who knew him. He was a progressive beekeeper and Mississippi is deeply indebted to him for his pioneer work in the introduction of modern methods in beekeeping. He will be greatly missed.

Sweet Clover in Illinois

This is the title of a bulletin just received from Urbana, published by the Experiment Station of the College of Agriculture. The authors are O. H. Sears, Associate Chief in Soil Biology; J. J. Pieper, Associate Chief in Crop Production, and W. L. Burlison, head of the agronomy department and Chief in Crop Production.

It is a very complete publication about the use of sweet clover in Illinois; climatic and soil requirements. varieties of sweet clover, sweet clover as a soil builder, how to handle the sweet clover crop, the value of sweet clover as a pasture crop and the culture of sweet clover. It also discuses sweet clover diseases and insects affecting the plants, with a summary at the end. Those interested, write to the University of Illinois, Agricultural Experiment Station, for Bulletin 594 "Sweet Clover in Illinois."

A Test of Caucasian and Italian Honeybees -- III.

By C. L. Corkins

NATURALLY, during the course of seven years of intimate contact with these two races of bees under experimental conditions with from 100 to 150 colonies each year, their characteristics under general manipulation have become pretty well understood. The things of which I shall write in this closing article would be termed by the biologist as "observational" rather than "quantitative" or carefully weighed by measurements. Usually I find the beekeepers are more interested in these observational characteristics than in exacting experimental results, for these are their own language. The beekeeper usually draws his conclusions in his own operations in the apiary by means of the observation method and important progress is made in this way even though it does not stand in exceptionally high repute in scientific circles.

Temperament

It is difficult for one to handle bees without adding expletives if not cuss words to the repertoire of his vocabulary. Aside from this purely academic consideration of the temperament of bees, the commercial beekeeper finds that the handling of the gentler bees speeds up manipulation and cuts down the cost of production. Without approaching the ideal by any means, it is safe to say that the Caucasians are the most gentle bees we have ever handled at the University of Wyoming. However, if they are handled roughly, disturbed by a marauder or manipulated when badly crowded, they resist furiously and always protect their hives with a force of persuasion not even equalled by the average Italians. Their attack differs from that of the Italians in three ways. First, when they come out, it is for business always, they sting at once or crawl about in search of an opening, instead of buzzing around the apiarist in swarms; they simply bore in right now and get it over. Second, they never come out to greet a beekeeper arriving at the yard nor do they escort him to the section line when leaving the apiary. Live stock or working teams are comparatively unmolested about a Caucasian yard. Third, the sting of the Caucasian is noticeably more painful than that of the Italian, although the after-effects seem to be no more severe.

Mr. Rauchfuss first called my attention to the fact that one can do things with the Caucasians in handling them that do not work so well with Italians, when in the course of equalizing colonies he simply shook bees from the strong colony in front of the entrance of the weaker colony. They walked right in and "stayed put." He further observes that in queen-rearing many liberties may be taken with them that are otherwise taboo.

Swarming

From the standpoint of the swarming propensity, there seems to be little or no room for choice between the two races. Swarming has not been a problem with us at the University, so perhaps we cannot speak authoritatively. A few Italian colonies have swarmed. None of the Caucasians have ever swarmed. Ordinary precautions in swarm control have been entirely adequate.

Robbing

Under our conditions we usually have a very serious robbing period in the fall following a sharp cutting off of the main honeyflow by a freeze. At this time the Caucasians quiet down faster and rob much less than the Italians. Unless unnecessary manipulations of the colonies are made at this time, it is very unusual to find any robbing among the Caucasians although they defend themselves well against the attacks of other bees. Of course, a very weak or deserted colony will be robbed, but the activity is not general and they do not go "hog-wild" as do the Italians.

Disease Resistance

So far as American foulbrood is concerned, if there is any advantage held by the Caucasians over the Italians it is because of less robbing. Each race seems to be equally susceptible to the disease. This disease is notably scarce in the Rauchfuss apiaries both in Colorado and Wyoming, but this is, in part, doubtless due to careful practices of prevention and cure.

Sacbrood is common in the brood of both races in our location, sometimes quite seriously so during the early part of the season.

We do not have European foulbrood, so no observations have been made on this disease. This may be important to many beekeepers and the relative merits of the two races on this score should be determined elsewhere.

Comb Building

Caucasians are much more prone to build burr and brace combs than are Italians. Beeways must be properly proportioned and crowding prevented or the hives will be logged and combs stuck together. From this standpoint the Caucasians need more manipulation than the Italians. The keeper of bees who carelessly manipulates or by choice or circumstance neglects his colonies had better stay with Italians.

On the other hand, the producer of comb or chunk honey will be delighted with the beautiful, white cappings produced by Caucasians. If properly manipulated, they are the better bees for the production of this class of honey.

Propolization

Because of the supposedly excessive use of propolis, the Caucasians have been severely criticized and even condemned to extinction for commercial beekeeping by some authorities. I have not seen this excessive propolization. True, entrances are contracted to a few one-beeway holes during the fall. Cracks are plugged and misfit supers, tops or bottoms are glued up tightly. But properly spaced combs, and correct beeway space between other parts eliminate excessive propolization where it is a nuisance. Occasionally a frame is found attached to the entrance plugs by propolis, but this does not occur during the active season when the bees are most frequently manipulated.

Perhaps the propolis problem is not as serious in our location as elsewhere. But I wonder if this characteristic has not been over-emphasized.

Package Bees

Our springs are very hard on bees, making it especially difficult to establish packages and get them to building properly. It has been very noticeable that during poor weather conditions or following the cessation of the dandelion flow, Italian packages required constant feeding and brood rearing would greatly slacken. During both kinds of adversity we never had to feed the Caucasian packages and brood rearing continued to build up normally. In addition to commercial beekeeping, this factor would seem to be rather important in orchard pollination. Experiments conducted in the East seem to bear out this point.

Wintering

Because more work needed to be done on the project, we have never published our results on the study of the relative merits of the two races in wintering. In general, their reactions to winter temperatures are the same. However, the Caucasians differ in the following details during the wintering season:—First, coincident with an earlier decline as well as complete cessation of brood production, the brood chambers are very much more heavily provisioned with

stores. Second, they go into the winter with a smaller population of bees but come out in the spring stronger than the Italians. Third, spring dwindling or "delayed winter loss" is very uncommon with Caucasians and very common with Italians. Fourth, outright winter losses are much fewer. Fifth, they consume far less stores during winter than do the Italians.

There is no doubt but that the Caucasians are the better bees for severe winter conditions, both in out-of-doors and cellar wintering.

Color

The color of bees has received the attention of beekeepers and breeders far out of proportion to its importance. Much has been said about the difficulty of finding Caucasian queens. Perhaps there is validity to this argument. Personally, I can't quite appreciate all the "fuss" about it. In the first place, the commercial beekeeper who includes the search of queens in his usual manipulation practices is far off the track in efficiency. In the second place, it is a simple matter to color-mark queens when they are reared, which completely eliminates any difficulty of finding a dark queen.

Perhaps I have made it altogether too apparent that I like Caucasian bees. But I have yet to meet an inter-mountain beekeeper who has tried them and does not. Beyond that territory, perhaps the Italian fanciers will have their "innings." Time, alone, will tell. But our country is rapidly going "Caucasian."

Hargitt Looks With Favor on Colorado

Glenn L. Hargitt of Normal, Illinois, a young man of great prominence and a beekeeper of several years' standing, is among our younger generation who is looking for commercial locations for beekeeping. It is nice to see young men taking the place of older ones with a more modern point of view and an advanced idea of management and possibilities.

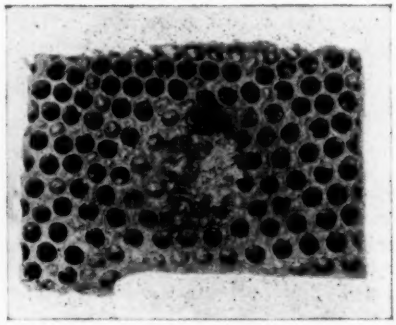
Mr. Hargitt has been studying beekeeping for about twelve years and has made a great success of his efforts locally. He has been called on many times for talks and demonstrations on bees and honey.

About October 1st he planned to leave for Colorado for a few weeks to study the bee possibilities in that state and then to California where he will visit his mother in Berkeley and pursue a course of public speaking and chemistry at the University.

Mr. Hargitt has been Secretary-Treasurer of the McLean County Beekeepers' Association in Illinois and a member of the Illinois State Association for the past four years.

The End of a Drama in Insect Life

By Chas. Hofmaster
Oklahoma



While going through the brood chamber of a hive, I found between the two last combs which I had not moved for several years on account of their being built irregularly, the embalmed body of a bumblebee, mute evidence of a closed drama in insect life.

The bumblebee had strayed into the hive, attracted either by the scent of honey or more probably in early spring in her search for a suitable place for a nest. She had been promptly attacked by the bees.

Trying to escape from her foes, she squeezed herself up between these combs till she became stuck fast. In this position, she was an easy prey for her furious enemies. After dispatching her, the bees were confronted with the task of disposing of the dead bee. There is evidence of an effort to gnaw part of the comb away but the bees finally proceeded with their usual method of disposing of obnoxious objects. The remains of the bumblebee were covered with propolis.

From 1919 to 1933

I worked the seasons of 1919, 1921 and 1930 with one of the largest beekeepers in Michigan. Then came the depression. Last year I operated 5 colonies of bees and bought a ton of honey to care for my trade I had around a sparsely settled community. This year I operated 10 colonies and at present have bought 300 pounds of honey outside to supply the demand. I have packed the best and demand the same in my outside purchases. And I don't forget the American Honey Institute. They are doing a wonderful work.

Elmer Carroll,
Carroll Apiaries,
Michigan.

Oranges and honey are about the best combination ever! Honey in the orange blossoms; honey ON the fruit, or in the orange drinks. No Spring tonic can equal THAT combination.

Fermented Honey

By W. C. Greenleaf
Michigan

I am a novice but have extracted fermented honey every year since I began to handle bees. Of course I sort out the frames that show fermentation (usually along the top of the frame) and extract them separately.

This question of fermented honey is serious and I have worried over it a great deal. I have just read the article "Ripe Honey" in the September number by H. F. Wilson and E. C. Alfonsus. It is very good. However, I see the whole question differently than they do.

Let me apologize first of all for criticizing men of their reputation. They speak of honey absorbing moisture between the time of extracting and the time of putting it in containers. I think that seldom happens. With me capped honey absorbs moisture while still on the hive. I find the outside frames of the top super nearly always sour, even in strong colonies that gained from 10 to 15½ pounds a day. These combs are completely capped over. Empty supers are added underneath or next to the brood chamber each time and towards the close of the honeyflow the colonies are weaker and not able to cover all the combs so the water vapor from the fresh nectar below rises or is forced up by the bees and, since it cannot escape, it absorbs through the cappings which, in our hot August days, causes fermentation.

Only three days ago, I took a colony of bees from the under side of the roof boards of an ice house. The honey was well ripened and of a heavy body. I would not wish for finer clover honey. The upward ventilation was perfect but the heat must have been intense. This disproves the statement in the article in question that heat is the controlling factor. We must have some ventilation and I think we should have empty supers on top. To my opinion the samples mentioned 4, 5, and 6 were unripe. Sample 7 was perfect. Samples 8, 9, 10 and 11 absorbed moisture while on the hive.

Honey always gets thicker and loses weight in the settling tank especially in dry summers. I expect to conduct a number of experiments next year along these lines and my friend, Russell H. Kelty of East Lansing, promises to help me.

We should put an exquisite article on the market, the combs should be sorted carefully and sometimes I think the users of 45-frame extractors producing carloads of honey are not careful enough and we have bulging cans which ruin the market.

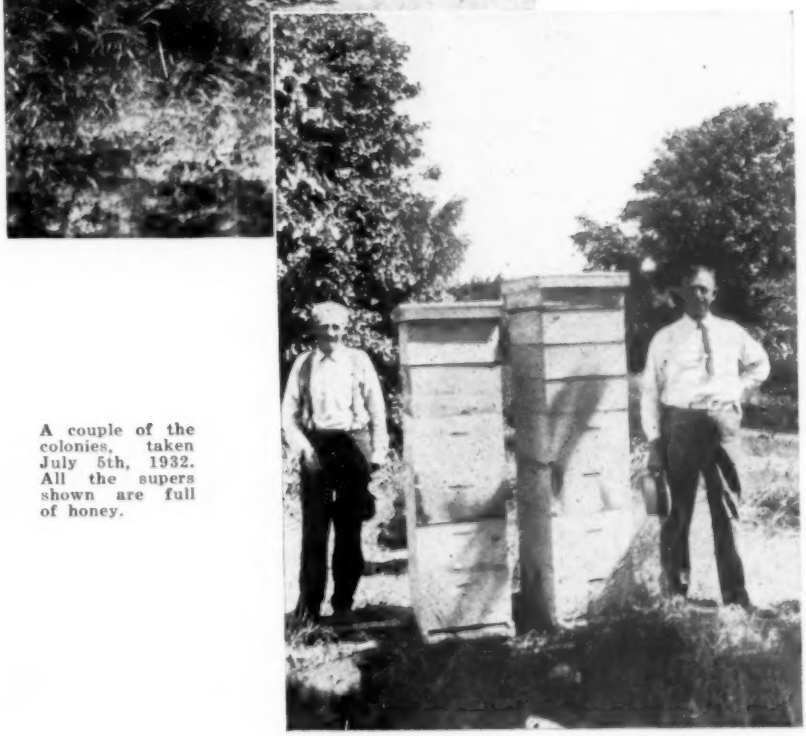
Snap Shots in Michigan

These pictures are of the apiary of McCutcheon and Dumon, of Big Rapids, Michigan. The bees are kept primarily to sting the orchard of McCutcheon Brothers and then, in order to make them pay their way (you see they are of Scotch descent) they are worked for production. We figure a larger and more certain crop of fruit, without expense—actually with a profit.

Twenty out of twenty-three colonies were piled up like those in the picture. The other three had bad luck, losing their queens at a critical period. The twenty prime colonies averaged 250 pounds of surplus last year.

John E. Dumon,
Michigan.

A corner of the yard, showing the natural windbreak and southern exposure to the sun.



A couple of the colonies, taken July 5th, 1932. All the supers shown are full of honey.

Another Bee Plant

By C. W. Wood
Michigan

It is quite likely that the age-old search for nectar-bearing plants by beekeepers has revealed the good points of Elsholtzia cristata. If it has, the fact has not become general knowledge for the plant is seldom seen in America.

It is unfortunate that the plant bears no familiar common name because its generic title is liable to be confused with the more familiar genera, Eschscholtzia, the California poppy. The flowers or plants have no resemblance, though, the one under discussion being a member of the great Labiatae family with lipped flowers while the other is a typical poppy. The genus Elsholtzia is composed of about twenty species in Asia, many of them too tender for our climate. One species E. Stauntonii, is gaining popularity in America as a garden ornament, being particularly prized on account of its late summer and autumn flowers. It is a small shrub, growing from two to four feet high in northern Michigan and bearing numerous long spikes of lilac flowers in September and October. Incidently, it is not hard to grow from spring-sown seeds. Its use as a honey or pollen plant has not been investigated but I should not be surprised to find out that it is one or both.

The plant with which these notes are mostly concerned (E. cristata) is an annual or at least acts as such in northern Michigan. It grows a foot, or a little better, in height, producing an incredible number of one-sided spikes which are crowned with light blue to lavender flowers. It starts to blossom in August from spring-sowing and continues to flower until frost, attracting bees to its nectar-laden stores all during that time. It comes readily from seed and is apparently easy to grow in any soil where it gets full sunshine. Even the leaves are highly fragrant, a factor not to be overlooked when its garden value is considered. The plant has enough ornamental value to recommend itself to the gardener as well as the beekeeper.

Honey Seller Must Be Neat

It seems strange that cleanliness of person is neglected in marketing foods in this day and age, but not long ago I heard a woman say of a local beekeeper who had appeared at her backdoor, trying to make a sale: "The looks of him was enough!" And, as she said, she bought some honey later of a younger man, clean-shaven and neatly dressed. The point is that the two were father and son and the honey came from the same hives.

F. H. Madison.

Why Change the Name?

While everyone is harping on the terrible brand of a terrible disease, American foulbrood, I'd like to pluck a string on this harp.

What good will it do to change the name? It is the disease that makes the name so dreadful. Whether it's foulbrood, bacillus larvae or flarva. Among humans an epidemic of flu is just as dreadful as Spanish influenza. Let's conquer the disease first, then we can forget the name.

Elmer Carroll,
Carroll Apiaries,
Michigan.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

COPPER COIL TO HEAT HONEY

We are thinking of using a copper coil to use steam heat to heat honey in tank. Will copper injure honey in any way?
ILLINOIS.

Answer.—Some honey contains considerable acid and it might damage it to keep it in copper for a while. I would prefer to have the copper coil tinned and then there would be no danger.

BEST RACE OF BEES

I am quite puzzled about which kind of bees are best for handling. Recently I went to a place where a friend of mine had dark three-banded Italians and when I went near his hive the bees started to fill the air and fly around lazily. He had a modern hive and took out a frame without smoking them and neither of us were stung.

I have a swarm of golden Italians and when approaching my hive the bees seem to take no notice but when I lift off the cover a few bees leave the frames and fly back and forth in quick motions and sometimes sting. I did not use smoke on opening the hive repeating what my friend did. I have read where bees that stay on frames are easier handled but when only a few of mine come off the frames they are quite cross. My friend's stuck to the frames well but a great deal of bees were in the air, but not one landing on either of us. Could you decide which bees are the best for beginners?
MASS.

Answer.—We prefer the Italian Bees to other races. But when they are mixed with Cyprians, they are brighter in color and more difficult to handle. We judge that the bees you mention are a mixture of races. We prefer the pure Italian.

I must say, however, that many beekeepers prefer the Caucasian bees. We do not like them, because their color is so near to that of the common race, that it is impossible to note a mixture of races. The Italian bees are best for this.

FALL WORK—HOW LATE?

(1) How late in the fall can I examine colonies without injury to them?
(2) How late can I requeen?
ILLINOIS.

Answer.—(1) You can examine colonies as long as they fly. But it is better to finish with them before the middle of October, although they may be examined on warm days at any time in the winter, if necessary.

(2) Requeening should be done before the end of September. It is really better to requeen, in our northern climate, before that month.

STRAINING AND HEATING HONEY

(1) When bottling honey, how do you strain the honey to get proper clearness?
(2) At what temperature and for how long do you heat honey to prevent granulation?
IOWA.

Answer.—(1) We never strain properly extracted honey. We put it into a tank and allow it to settle. The lighter impurities come to the top and are skimmed off and the heavier ones go to the bottom and are drained after the honey is removed.

(2) We do not aim to heat the honey at all, to keep it from granulating. Many people prefer it granulated and we think the customers should get accustomed to melting it when wanted liquid. On the other hand, many kinds of honey never granulate and it damages the honey to heat it unless the heating is very carefully done and the temperature low, say no higher than 140°.

"PURE" HONEY

If you will pardon the question, please define in your usual clear English the word "PURE," as applied to liquid honey offered for sale and use in these Continental United States.

It seems to the writer that this little innocent adjective is quite the most abused, misused, ill-advised and misleading word appearing on honey labels, unless it be the word "Extracted."

In as much as the first and greatest purpose of a label is to frankly and truly advise the inquirer as to the exact package content, it behooves honey sellers to determine and agree upon the meaning of PURE.
MASS.

Answer.—Pure honey, in my mind is honey which has been harvested by the bees from flowers of different kinds and has not been mixed by the beekeeper or the dealer with other sweets, such as sugar syrup, or any glucose.

There may be some pollen in the honey, but we do not consider that this renders it impure, for the same may be said of any comb honey. If we can sell our honey to the consumer without its being mixed with any artificial syrup or with honeydew, we can be sure of a profitable sale.

UNITING

I often see the statement made to unite weak bee stands with others and package bees, to unite with others how is this done to keep them from killing one another? I tried to unite two. Put a screen wire between, left them for three days, then took it out. There was a battle royal and many dead bees. I am a new beginner and don't understand the business, and I see no discussion of how to do it. If you could give me some advice I would be much obliged.
ILLINOIS.

Answer.—The important thing to learn is that bees are most peaceable when they are full of food. Therefore you should feed the colonies that you wish to unite, plentifully. Then when they are quiet, in the evening, put the weaker of the two colonies on top of the other, so arranged that the two clusters will be as close together as possible, without any division between the two except a sheet of paper. They will gnaw through the paper and will unite peaceably, if things are arranged so there may be no cause for trouble

We have united bees in this way many times. It is called the newspaper method.

If you have found it possible to make the weaker colony queenless before hand, it will make matters that much easier.

PACKING AND FEED

In packing bees for winter in Modified Dadant Hive, is there any advantage in keeping extra supers of honey and putting on in spring rather than to pack extra supers on hive through the winter?

I pack two colonies to a wooden packing case on matched lumber allowing amount of packing recommended by government for this locality.
NEW YORK.

Answer.—We usually make sure that the bees do not store too much honey in the supers at the expense of the brood chamber. If you have a large number of supers during the last of the crop, on the hives, it is possible that the bees will not fill the brood combs half full for winter, as they should be. In that case, we have to keep a super of honey on the hive. But usually there is plenty of honey for winter on each colony, in the upper half of the brood combs. Of course, if the bees should be short, when spring comes, you will have to give them a super, as, "food chamber," the name used at present.

Your method of packing appears all right from your description.

LOCATING BEE TREES

I would appreciate any information on the subject of locating bee trees. Is there some way of attracting the bees by burning or heating oil of anise?
WISCONSIN.

Answer.—Bees may be attracted by burning old combs in such a way as to make considerable smoke. The odor of burnt combs attract them. We have never tried oil of anise, but it cannot do better than the old combs.

HONEY HOUSE

I am thinking of building a small building this fall or next spring to be used in my bee apiary. I would like very much if you would send me what would be the best shape and size building to make for an apiary of 100 hives.

I would like to have this building large enough to use for storing all of the empty hives, extracting and comb supers. Room for extractor, the storing of the honey in the fall and summer, and all other needful material and work shop. The lumber will only cost me the sawing and hauling.
MINN.

Answer.—The making of a building for apiary work and storage has so many possibilities that it is impossible to give you any directions. The only thing I wish to recommend is to have a separate room for extracting and storing combs, on account of the danger of getting moths in the combs. A special room would also be needed in which to handle honey, so that there would be no danger of flies and bees annoying the one who put up the product.

A large room for storing hives and supers, a carpenter room for making and repairing hives, an extracting room, a honey room, will be needed. If the honey room is not large you may also need a room to store empty honey cans.

Besides, if you wish to winter your bees indoors, it would be a good plan to have a good dry cellar. This might be useful also when keeping honey for a while in the winter.

So you see that it would be difficult for me to have a description made of what is needed. You had better get a good architect to figure with you. Be sure to have your extracting room nearest to the apiary.

HONEY MEAD—CAN YOU ANSWER?

I notice in the September issue of the American Bee Journal under The Editor's Answers, an inquiry from a New Jersey correspondent for a recipe for making Mead, "The old fashioned honey drink."

The recipe given by you is rather vague as to the proportion of fruit juice to honey. Also no mention is made of a ferment. A recipe I received last summer from the American Honey Institute mentioned the use a cake of yeast, to be added after boiling the honey water and the rind of a lemon, as I recall it. The recipe I used was about as indefinite in some respects as that you furnish and I found great difficulty with too much fizz. My meade became almost unmanageable after it was in the bottles a couple of weeks. It was positively wild, and when the cap was taken off the bottle the mead all blew out of the bottle, leaving about a teaspoonful to be poured out into the glass.

Your recipe, coming in the same issue with directions for making vinegar and compared with the latter, strikes me as so

similar that what your New Jersey correspondent is likely to get is vinegar instead of mead.

Looking up the word mead in the dictionary I find that the word has equivalents in nearly all the languages of Germanic Europe. But there are two kinds of mead. One apparently an alcoholic drink made with honey (intoxicating), and another made in the U. S. composed of syrup, sarsaparilla or other flavoring extracts and water impregnated with carbonic acid gas. The latter is the mead that old timers bought in their school days before the days of soda water. I am wondering if the New Jerseyite has this latter in mind?

Would you mind asking your readers for their experiences in making mead from honey and let us have a real good and reliable recipe with exact instructions.

PENN.

Answer.—Yes, there are as many different kinds of mead as honey will make when mixed with water in different proportions, just as there are different kinds of wine, according to the greater or less sweetness of the grapes. But it must all go through the alcoholic fermentation first and will turn to vinegar only when the alcoholic fermentation is ended. In your case, you did not wait long enough and that is why the liquid would not stay in the bottle. They make Champagne wine in this way but they let it ferment longer even than you did. However, if you learn the conditions of fermentation, you can make excellent Champagne with honey.

As to the drink made artificially by the use of carbonic acid gas it is an inferior drink at best.

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from the Little Blue Kitchen

Thanksgiving Devotional.

For all thy bounty, Lord,
  We thank Thee on this day—
The gold of grain, the green of sward,
  For skies of gold or gray.

We thank Thee for the food
  Thy goodness doth provide,
For lilac haze and leaves bright hued
  That deck the countryside!

We thank Thee for our homes where meet
  Dear ones at eventide
For loyal friends whose handclasps sweet
  Bid courage in us bide.

Dear Father, on this day
  Before thy throne we bow,
And most of all our thanks we say
  For such a God as Thou!

Lida Keck-Wiggins.

— : —

HONEY Lady greets all her Blue Kitchen readers from a new home, from a new Blue Kitchen. Outside Blue Kitchen windows is a lovely meadow, full of clover blooms where in summertime there will be the familiar hum of the ever present busy bee. Beyond this stretch of green velvet sward is a range of mountains, whose changing colors are an all-day delight. At another angle there is a silver gleam which is the Hudson, and beyond it more mountains—the Cattskill of Washington Irving and his Rip Van Winkle romances. At the time that Blue Kitchen readers will peruse this, this entire countryside will be a-flame with the most gorgeous reds, and yellows and browns that human mind can conceive—yet they are the reds of our mid-western maples, the yellow of our walnuts and other old-timers, and the sumac, already glowing like beacon fires all over the nearby fields, is the same old "burning bush" we've loved from the days we knew it as we trudged to the little red-schoolhouse on the hill. Perhaps the leaves are a little more crimson here; the wild aster a little larger and more as though it had been cultivated by man out of its earliest smallness of bloom; perhaps the golden rod has just a tinge more of golden yellow—and perhaps the river a wee bit wider than the Ohio or Indiana streams, but, beautiful as it is, it's all a part of the Plan, and as Honey Lady's eyes turn from the outside she finds herself surrounded by all the pretty blue things that gave the Kitchen its name in this department—home it is—and Blue Kitchen it is as always, and honey is on the shelves, ready to be made today into many a charming dish.

But Honey Lady wants to tell first of a little Pullman diner incident enjoyed while coming to the new home near Beacon Mountain, N. Y. The train was skirting the beautiful Hudson, and every view as she picked her way to the dining car was just another Turner or Inness painting in real life. As she entered, Mr. Jones, the head waiter bowed her to a river-side seat and then she heard the words that galvanized the Honey-Lady side of her brain into immediate action—"The wheat cakes and honey are very fine this morning madame," Mr. Jones said when pulling back a chair for her by a riverside table. "Thank you, I'll have some," she replied, and the head waiter had told the truth—they were fine and again she enjoyed the delicious combination of wheat cakes and honey—eating the full portion with a zest.

"Do you find this a popular breakfast dish, Mr. Jones," Honey Lady asked, as he walked by, eager to see that all the guests were properly served. "Yes, indeed. We frequently have it on our menus and always there are many orders." So, while Honey Lady has before now spoken of wheat cakes and honey as a breakfast luxury, still she happens to have a somewhat different recipe for wheat griddle cakes, and so she passes it along:

Wheat-Honey Cakes

1 pint sifted flour;
½ teaspoonful of salt;
3 teaspoons of baking powder;
1 tablespoonful strained honey.
2 eggs;
1 cup milk;
2 tablespoons of melted butter;
Enough more milk to make batter about the consistency of thick cream.

Directions: Mix the flour and salt first, blending well; then the baking powder.

Mix the milk and the honey.

Beat the eggs until very light, then turn into them the honey and milk blend. Stir this slowly into the flour, salt and baking powder mixture and then add the butter which has been melted but not allowed to brown.

Finally, as above stated, add enough milk to make the batter about as thick as cream.

To obtain the smooth, delicate brown surface desirable use a griddle uniformly hot and whose surface has been greased with ham or pork rind, held on a fork which leaves just the merest film of grease. Drop the batter from end of spoon. When full of bubbles and before they look dry on top, turn with cake turner or broad knife.

These served with honey are just as nice for the home table especially these November mornings crisp and with a bite in the breeze as they were that early September morn on the Pullman diner, with the very polite Mr. Jones in attendance.

Ever try sweetening your coffee with honey if sugar happens to be low in the bucket? It's a nice change to say the least.

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Now as we're on the subject of breakfasts, one invariably thinks of bacon as a morning dish, or as an accompaniment for fried eggs, but here is a recipe for muffins which while delicious at breakfast are also fine for dinner—they are called:

Honey Bacon Muffins

and here's the how, my good cooks, looking for something new to tickle the jaded family palate:

1 cup sifted flour;
1 teaspoon baking powder;
⅛ teaspoon salt;
1 tablespoonful honey;
¾ cup milk;
1 tablespoonful bacon fat;
1 egg well beaten;
1 tablespoonful broken crisp bacon.

Directions: Mix melted bacon fat and honey; add to one egg, slightly beaten then add milk. Stir in the dry ingredients which have been sifted together twice. Beat thoroughly, then add broken bits of crisp bacon. Bake in a well greased muffin tin twenty-five to thirty minutes.

Honey Lady wishes to give credit to Mrs. James Mullane of New York State for the recipe which having been duly tried out in the new Blue Kitchen lab is passed along as a truly delicious morsel.

—:—

Here's a nice little "something different" salad to serve with the Thanksgiving Dinner especially if you were forehanded enough to put up some of the gorgeous peaches this season afforded. It's called simply

Peach Salad

1 large can peaches;
½ cup cinnamon candies;
1½ cups white grapes;
1½ cups chopped blanched almonds;
Crisp lettuce;
Cream, sweetened with a bit of honey is fine for a change from mayonnaise.

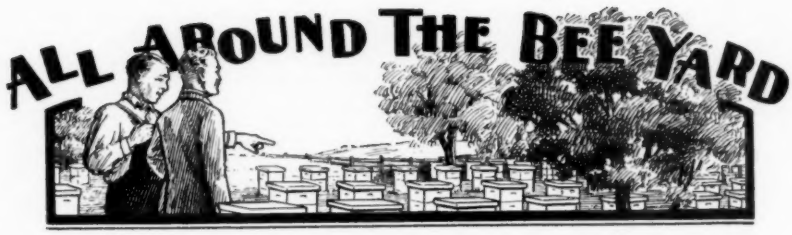
Here's the way Honey Lady makes this delicious salad: Open the can of peaches and turn into saucepan; bring to boil, add candies and simmer until the peaches become pink; remove from heat cool, and chill in this syrup. Seed and halve large white grapes, allowing 8 for serving. Chill. At serving time arrange on lettuce leaves, half a peach on each plate, well drained, and fill with the grapes and almonds.

Top with the whipped cream, slightly honey-sweetened (granulate honey is nice for this) and serve.

—:—

How about asking that lonesome student, staying at the school during Thanksgiving vacation, because he can't afford the fare home and back, to **your** house for dinner that day? You'll give at least one person a cause for sincere thanksgiving; moreover the average husband isn't any too thankful when there's an oversupply of Thanksgiving leftovers to serve up to him for days after.

Unjust enemies are like unto bees; they buzze, they make a noise; they have stings; but their power is less than their spight and malice; and they hurt not but with their owne certaine death and destruction.—Culled from an early writer by W. H. Hull.



By G. H. Cale

SWARMS in October! Notice I said **swarms**—not just one. It is nothing unusual to see an occasional swarm at this late date but to have two or three in several yards from the first of October until the 15th, is very unusual for this location. J. H. Tichenor, in Wisconsin, writes that he hived a swarm on September 26 hanging on a neighboring apple tree. He says, "I have kept bees more than forty years but never before hived a swarm so late in the season. I believe this is unusual for Wisconsin." So it may be. Most of the October swarms observed here were small and were probably late supersedure swarms—unusually late though.

—o—

Quite a number of colonies here will be short of honey for winter. It seems always to be that way even though the circumstance may be criticized as poor beekeeping. Too much to do.

We are trying the plan of feeding syrup to make sure that each colony has at least 30 pounds of stores for the winter period and setting aside a super of honey in the honey house, stacked and covered, well protected from moths, so that a super or a part of a super of honey may be given to each colony in the spring when they become short of food.

Instead of putting the super directly over the bees, our plan is to put the super on an escape board, with the hole open so that the bees will come up through the center of the board and take the honey down gradually to the brood nest, thus stimulating the increase in brood and supplying the efficiency of stores at the same time. This has been tried in other ways with good results. George Watt of the Platte Valley Apiaries, Nebraska, and E. L. Hofmann of Janesville, Minnesota, put supers of honey underneath the brood nest, on the bottom board, in the spring. The bees take the honey up with the same results. We have tried the escape board method in a few instances and it works well.

—o—

Ever try to move bees a short distance? We have a plan that works. It was published in "Gleanings" but we do not remember the reference. Move the bees any distance to their new location and put a hive with combs on the old spot. Returning bees will go to the dummy and then be united with the colony which was moved using a newspaper after the Miller plan. The bees will not return again to the old location.

—o—

At least one nest of bumblebees took a licking this fall. They were under a board at the back of a hive. How the fight started, I don't know but the honeybees attacked the bumblebees, scattering them high, wide, and handsome; took all their honey and the poor bumblers never reorganized again.

—o—

It is thought to be a good plan, when a queen is killed in requeening, to cast the body of the dead queen in among the bees in the colony so that they will know immediately of their loss, and therefore, become more quickly in a mood to accept a new queen. We have practiced this for years. Last summer an occurrence made us stop the practice.

The dead queen was thrown among the bees on the top of the frames; a few bees ran up to her body and, apparently becoming enraged began to fight with each other. In a few minutes, the fight spread all over the top of the hive. Then the excitement continued down among the bees of the colony below until rolling, fighting, angry mobs that had turned on each other, poured from the entrance and over the sides of the hive. An unusual occurrence and a terrible one to behold. When it ended, at least half the colony was dead in front. I have seen no mention of a similar occurrence.

—o—

Since we started this month with swarms, let's end with swarms. A swarm of bees left a hive at the end of row No. 2, clustered in a tree, remained about a half day, then returned to the hive at the end of row No. 3 where they were practically all annihilated in a scrap. A case of mistaken identity.

Many wholesale dealers in honey report that their trade is ruined by beekeepers who sell to their trade at the same price as to them, thus making it impossible to realize a profit. The greatest need of the beekeeping industry is a stabilization of the market for honey.

NATIONAL HONEY WEEK

This month, November 13-18, make your plans early.

Now is the time to complete your plans for your National Honey Week program in cooperation with American Honey Institute to repeat again the great national observance of "Nature's Finest Sweet." Write to American Honey Institute, 417 North Few Street, Madison, Wisconsin for any help you may need. **Remember the date, November 13th to 18th.**

Send in your requests early for outlines to help you in carrying out the local observance of National Honey Week. The Institute has a suggested program for beekeepers including suggestions for honey displays, demonstrations, newspaper publicity and radio broadcasts. Write direct to American Honey Institute, 417 North Few Street, Madison, Wisconsin. They also have recipes on the use of honey, recipe folders and printed sheets, honey helpings for home bakers, honey helpings for parties in the form of a radio broadcast, honey displays at grocery stores, honey helpings for bakers, and several long radio broadcasts. Honey ought to go over with a bang with all this material which you can use for your local tieup with the big national program sponsored by American Honey Institute and all of its cooperative industrial and government agencies.

Of special interest is the Institute's beautiful folder, "Honey Helpings" containing the very choicest recipes developed by the Institute for the use of honey. These folders may be obtained as low as 75 cents per hundred or $4.95 per thousand and still lower prices to any subscriber authorized to use the official seal of the Institute. Subscribers to the work of the Institute are considered members of this great organization.

Any beekeeper who rally wants to do so can observe the week in some way. He has hundreds of chances to sponsor a program. The Institute can furnish outlines for programs for grocers, druggists, candy shops, soda fountains, restaurants, hotels, banks, beauty parlors and other local retailers. All of these are available at cost direct from the American Honey Institute, 417 North Few Street, Madison, Wisconsin.

Two big national broadcasts will be used this year. One by Miss Baker of Rumford Baking Powder Company. The subject is "With Honey, Molasses, and Maple Syrup." Note that honey is placed first. The schedule of this broadcast will be from 10:45 in the morning on Monday and Thursday to 11:15 at various other stations, so listen on the air between 10:45 and 11:15 on Monday and Thursday of National Honey Week for Miss Baker's broadcast.

The second broadcast is by the Federal Government from 12:45 to 12:59 Tuesday, November 14th on the Farm and Home Hour Program of the Department of Agriculture. Dr. C. A. Browne of the Bureau of Chemistry and Soils will give this broadcast with the title "Chemists Seek New Uses for Honey." Dr. Browne is well known as the author of Bulletin 110, of the Bureau of Chemistry, "Chemical Analysis and Composition of American Honeys," rated as the most comprehensive treatise on honey from a chemical standpoint that has yet appeared.

Remember the hour—12:45 P. M. to 12:59 P. M. (noon) Tuesday, November 14th, on the Farm and Home Hour Program, of the Department of Agriculture.

Local Broadcasts

Professor Paddock, in cooperation with the Iowa Home Economics Department, will have local broadcasts. Write to Iowa State College for schedule.

Professor Richmond, Colorado, reports that Dr. Sturtevant of the Bee Culture Field Station, at Laramie, will broadcast over KOA, Denver, 12:30 Rocky Mountain standard time on November 13th.

Dr. Phillips, Cornell, Ithaca, New York, reports that they will give a number of broadcasts in that state.

Mrs. Julia Kiene, Editor of the Home Department of Capper's Farmer, will give two broadcasts with honey recipes during National Honey Week. Connecticut will also have broadcasts.

Other states that have indicated their interest in the program by sponsoring it in special ways through their state departments are Wisconsin, Florida, Pennsylvania, New Jersey, Michigan, Minnesota, North Dakota, California. Definite reports as to their activities are not at hand.

Cooperation from Companies

The Kellogg Company will have a window card and honey recipe booklet as they have other years. Send direct to the Kellogg Company, Battle Creek, Michigan, for this material.

The Great Atlantic & Pacific Tea Company will include honey in the menus and recipes of the A. & P. menu sheets distributed that week. The circulation of this sheet is over half a million. Their food market releases going to approximately 1800 newspapers will call attention to honey to thousands of housewives.

General Mills will send a recipe card with all cooking school material to members of their fall course with suggestions for using biscuits with honey. This message will reach thousands of women in the cooking schools. It is also possible that Miss Crocker will mention honey in her broadcast during National Honey Week.

Publications

National Grocers' Bulletin will run an announcement on National Honey Week in the National Grocers' Bulletin. Baker's Helper are urging Bakers to tie in with National Honey Week. Baker's Review publish recipes for bakers and gives attention to National Honey Week. Food Field Reporter carries an announcement of National Honey Week.

Utility Companies

Mrs. Luella M. Fisher, Iroquois Gas Corporation, Buffalo, New York, will observe National Honey Week again this year. Last year she gave home demonstrations and distributed recipes to more than 3,000 of her class members.

Mrs. Laura Judd Bryant, Home Service Director, The Union Gas & Electric Company, Cincinnati, will give a honey demonstration during National Honey Week to her cooking classes. She is also running an article in her Home Service Bulletin.

Railroads

Dining Car Superintendents of three railroads will feature honey on their menus during National Honey Week—Louisville & Nashville Railroad, A. E. Flock, Superintendent of Dining Cars, Louisville, Kentucky; New York Central Lines, John R. Smart, Manager, Dining Service, Melrose Central Building, New York City; Missouri Pacific Lines, L. E. Martin, Superintendent Dining Cars, St. Louis, Missouri.

Other Cooperators

Corning Glass Works, through their Home Economics Director, Lucy Maltby, will have special honey recipes in fall and winter publications. American Stove Company, through Home Economics Director, Dorothy Shank, will include honey in their official publication, The Red Wheel. Du Pont Cellophane Company will have a feature honey display in their exhibit space at Atlantic City. Marian F. Sawyer, The Detroit Free Press,

will include a honey dish in demonstrations in her Traveling Kitchen and also in her Tower Kitchen Auditorium with honey prizes furnished by the Michigan State Beekeepers' Association. She expects to have from five to seven demonstrations each week.

Annual Meeting of Institute and League

The dates for the annual meeting of the American Honey Institute and American Honey Producers' League has been fixed for February 19, 20 and 21, at Minneapolis, Minnesota. Complete details will be available later.

British Columbia Beekeepers to Exhibit at the Imperial Fruit Show

Island and Mainland beekeepers, representing each of the thirteen agricultural districts of the province, will combine to exhibit thirty-nine entries at the Imperial Fruit Show to be held at Bristol, commencing October 27. The entries are being prepared under direction of A. W. Finlay, Provincial Apiarist, and the honey will go forward, via New Westminster, on October 2, to England.

British Columbia honey exhibits captured the majority of the prizes at the show in the last two years, and this year will have less competition from Ontario and other eastern apiaries, where a short crop of honey has been reported.

F. H. Fullerton,
Vancouver, B. C.

Oregon Beekeepers Meet November 10 to 11

The dates for the Oregon State Beekeepers' Association meeting are November 10 and 11th. The meeting will be held in the Multnomah Hotel, Portland, Oregon. The program this year will be of especial interest to beekeepers, processors and distributors. Mr. L. D. Williams, fresh from the Honey Producers' League meeting, will have information of value, and the Department of Agricultural Economics, Oregon State College, will discuss trade agreements and cost survey studies.

Research studies of the Pacific States Bee Culture Field Laboratory, Davis, California, will be presented by E. L. Sechrist, Associate Apiculturist, and developing new uses for honey by chemical research by Mr. L. J. Dame.

The Chief of the Division of Plant Industry of the Oregon State Department of Agriculture will present his impressions of the first year's operation of the Oregon Bee Inspection Law, and will be prepared to receive any and all brickbats provided the throwers are not professional baseball players. Don C. Mote,
Acting Secretary.

Wyoming Association Names Earl C. Reed As President

The Wyoming Beekeepers' Association named as president, Earl C. Reed of Ranchester at a meeting held in Casper the last week in September. Other officers are: George Krause of Riverton, vice-president; and C. L. Corkins of Powell, secretary-treasurer. Harry Ingalls of Basin, and Corkins, were selected to represent the state at the regional meeting held October 6 and 7 at Salt Lake City, covering Colorado, Wyoming, Montana, Idaho, Utah and Nevada. The primary purpose of the meeting was to consider honey marketing agreements under the Federal Agricultural Adjustment Act.

Lucius S. Flint,
(Bartlett Service).

Forty-Third Annual Convention of the Illinois State Beekeepers' Association, November 15

The Annual Convention of the Illinois State Beekeepers' Association will he held November 15 and 16; 1933, at the St. Nicholas Hotel in Springfield, Illinois.

Many things of importance to the beekeeper will be presented at this meeting and as the meeting to formulate a code for the beekeeping industry will be held prior to convention we expect to have a report of recommendation to present to the beekeepers.

At the annual banquet of our convention, in addition to having many outstanding guests and speakers, we also expect to have a real treat in the form of entertainment; Margaret E. Brooks will present "Green Pastures."

The year of 1933 has been a year of doing things and we, as beekeepers, will have to do out part by attending this convention and formulate plans for the future. We are expecting you in Springfield November 15th and 16th.

Iowa Convention and Short Course

The Convention of Iowa Beekeepers will be held in connection with the short course at Iowa College of Agriculture at Ames, on November 16, 17 and 18. The out-of-state speaker is Jay Smith of Indiana.

The meetings of the Iowa Horticultural Society and affiliated organizations will be held at the same time.

Wisconsin Meeting, Milwaukee, November 23

The Association convention will be held in Milwaukee on November 23 and 24 at the Hotel Plankington. The Board of Managers Meeting will be held at 7 o'clock the evening of November 22.

Washington at Yakima, November 7

The Washington State Beekeepers' Association meets this year in Yakima, Tuesday and Wednesday, November the 7th and 8th.

California at Modesto, Dec. 12-14

The California State Convention will be at Modesto, December 12, 13, and 14. Secretary Hartman says it will be the best program in the history of the State Association. Hail to him!

Meeting of Honey Producers' Marketing Agreement Committee, St. Clair Hotel, Chicago, Illinois; October 14, 1933.

At the meeting called by President Gwin of the Honey Producers' League to formulate a Honey Producers' Code the following committee was appointed:

Chairman, C. L. Corkins, Wyoming; Secretary, R. H. Kelty, Michigan; E. T. Carey, New York; W. O. Victor, Jr., North Dakota; S. D. Williams, Oregon; R. H. Erickson, Wisconsin; J. F. Moore, Ohio.

A consideration of the problems involved in working out a code which will be acceptable to 65 percent of the producers made it apparent that no easy task confronted the delegates. The following recommendations were adopted by those present as a means of learning the attitude of honey producers generally. Those interested are requested to get in touch with members of the committee with suggestions.

Motion No. 1

That this Committee recommend to the General Convention that we adopt the principle of a Honey Marketing Agreement under the Agricultural Adjustment Act for the purpose of stabilizing the market for honey.

Motion No. 2

That we prepare a code which will be national in scope covering both wholesale and retail distribution of honey, patterned after the suggestions included in the Inter-Mountain Code, to be amended as ncessary to meet requirements.

Motion No. 3

That this Committee recommend that the Marketing Agreement include all honey and beeswax.

Motion No. 4

That this Committe go on record as favoring minimum prices based on terminal delivery for the wholesale pack.

Motion No. 5

That this Committee recommend that the National Board of Trustees establish a limited number of standard sized retail packages.

Motion No. 6

That this Committee recommends that there be established uniform, regional, minimum delivered wholesale prices for the retail pack, in accordance with the grades and standards hereinafter to be established, said prices to be fixed by the Regional Board of Trustees, subject to the veto of the National Board of Trustees.

Motion No. 7

That this Committee recommends that uniform Regional wholesale prices for the retail pack be established by the Regional Boards of Trustees in accordance with the grades and standards hereinafter to be established, based on the principle of a legitimate minimum cost of packing, and the Regional Boards of Trustees be obligated by the Marketing Agreement to establish a minimum spread between Regional wholesale and retail prices.

Motion No. 8

That the United States grades and standards be adopted in this Marketing Agreement.

Motion No. 9

That for the purposes of this Marketing Agreement the United States be subdivided into not more than five regions, each region to be represented on the National Board of Trustees by one producer and one packer of honey, and the President of the American Honey Producers' League.

Apicultural Section, American Association, Boston, December 27

The forty-sixth Annual Meeting of the American Association of Economic Entomology is scheduled at Boston, Mass., December 27th - 30th, 1933. The Apicultural Section of this meeting will open Wednesday afternoon, December 27th. Hotel headquarters will be at the Hotel Bradford. Reservations for rooms should be made as soon as possible if one is to receive special convention rates.

W. E. Dunham,
Sec'y of the Apicultural Section.

Pres. Keck, Idaho Association Reports Excellent Crop

Idaho's honey crop will total approximately 75 per cent of the peak production of 208 carloads in 1928 according to H. H. Keck, Paul, Idaho, President Idaho Honey Producers' Associations. Mr. Keck presided at a recent regional meeting at Twin Falls to consider a code for beekeepers, with a view to fixing a minimum price for honey at a terminal point with allowance for differential for transportation from honey producing regions. Meetings were also scheduled for the same purpose at Boise and Idaho Falls. Beekeepers at Idaho are enthusiastically behind the code movement according to President Keck. Glenn Perrins,
Utah.

Utah Annual Meeting Also Discusses Possible Code

Nearly 300 beekeepers from seven Intermountain states attended the Utah Annual Meeting at Salt Lake City, October 6th to 7th and discussed the adoption of a code for the honey industry.

R. D. Bradshaw of Wendell, Idaho, chairman of the committee named to formulate the agreement on marketing, said that beekeepers of the six western states will market under the Agricultural Adjustment Act. The committee recommended establishment of a National Board of Producers, Processors and Packers, with Regional Boards to carry out marketing agreements.

J. Fleming Wakefield, Provo, President of the State Organization, called the meeting together with representatives from Idaho, Nevada, Arizona, Montana, Colorado, Wyoming and Utah. A code to govern Intermountain states was adopted for recommendation to the National Code Committee at Chicago. Another meeting and general election of the Utah Association will be held at Salt Lake City in January. Glenn Perrins,
Utah.

Yakima County Association Reports Spray Loss

At a recent meeting in Toppenish, Yakima County beekeepers expressed concern over the menace due to the spraying of potato fields for potato beetles which has resulted in the poisoning of many bees. Colorado beetles not only have menaced the potato crop of the Yakima Valley, but have reduced the production of honey by nearly half.

Colonies of bees, moved from the orchards to avoid spray to the reservation where the bulk of the potato crop is grown, were there in danger from the spraying of the potatoes resulting in great losses. Several beekeepers are considering moving to Montana.

R. L. Webster, Entomologist, told the producers that funds for experimental work to find a substitute for lead arsenate potato spray have been reduced by the government, but urged that a campaign for research work be continued. W. C. Wixsom reports that county commissioners will give $150.00 for bee inspection work.

I. L. Neill,
Washington.

Pierce County, Washington, Holds Delightful Picnic

Field demonstrations, beekeeping talks and plans for autumn and winter management of bees featured a delightful picnic in October of the Pierce County Beekeepers' Association, with beekeepers coming from Tacoma and other cities from the large county south of Seattle. It was held at the I. C. Hernan Apiary, at Ohop Camp No. 1, near Kapowsin.

Opportunity to get together at the Hernan apiary, to come into contact with each other in the outdoors, exchange information and profit from each other's experiences in the solution of common problems, was enjoyed on this October occasion, and gave fresh impetus to the popularity of the picnic type of meeting in the honey producing state of Washington.

C. M. Litteljohn,
Washington.

Record Honey Display at Canada Pacific Exhibition

A record honey display was seen at the Canada Pacific Exhibition, Vancouver when beekeepers from all over British Columbia demonstrated the truth of their claim that British Columbia honey is among the best in the world.

More than two tons of honey was distributed. One of the best displays was from Mr. Thompson's apiaries at Strawberry Hill and the displays of H. C. Derrick and Jack Holt were well regarded. Award for the best bottle display went to G. F. Pearcey of Kelowna. Mrs. Chipperfield of Langley Prairie displayed a practically white honey produced entirely from fireweed.

J. R. Street, blind beekeeper, of Hammond, B. C., had a display which attracted much attention. Another display from the P. G. E. section was very interesting. The bees in this area have to obtain their honey from the sides of the mountains and often they go as high as 3000 feet to obtain it from the heather.

F. H. Fullerton,
British Columbia.

Report of Virginia Meeting

Nature in its summer beauty, the fellowship of mankind, and the progressive spirit of Virginia beekeepers drew us to the home of J. L. Winebarger, July 20th as portrayed by accompanying photographs.

A delighted crowd of approximately one hundred people (beekeepers and their families) partook of a full program which included a picnic lunch of fried chicken, sandwiches, pie, honey cookies, cold drinks, cantaloup and watermellon. Notice the groups talking while they eat.

These Virginia Beekeepers are shrewd business men, many active leaders in their communities. They listen intently to the famous words of the loud speaker, then cull, select or combine the tips thrown at them to agree with their own good judgment.

I was once told, "It's hard to fool

(Please turn to page 445)

Crop and Market Report

Compiled by M. G. Dadant

For our November Crop and Market report, we asked reporters to answer the following questions.

1. How big is final crop compared to 1932?
2. How is the demand—Local—Jobbing?
3. Are prices above 1932? Is there an advancing tendency?
4. What are you getting, retail, for 5-lb.—10-lb.—for comb per case?

Crop Compared to 1932

Final reports on the season's crop do not vary much from our previous estimates and show that there is a woefully short crop in practically all of the larger producing centers. The following states only report 100 per cent or better—Virginia 150% which had a failure last year, Florida 200% (also part failure), Tennessee 150%, Arkansas 150%, Illinois 125%, Iowa 125%, Missouri 150%; Wisconsin, Minnesota, Nebraska, Kansas, Colorado 100%; Montana 110%, Idaho 110%, Ontario 125%.

All the other states range from almost a complete failure in states like Alabama to 40 or 50 per cent in the New England states and New York, and ranging as high as 75 per cent in the case of Maryland and 90 per cent in Michigan where the northern peninsula helps pull down the southern part of the state.

In the Canadian provinces, Ontario alone shows more honey than last year but last year was light. Manitoba will only have about 75 per cent of last year's crop or perhaps less and British Columbia about 50 per cent.

Nevada has almost a total failure. Utah only 60 per cent and the Dakotas will range much less than normal. California also is about 50 per cent and Texas will run not over 60 per cent of last year so that you can see that all of the larger producing areas are short and very much short of last year's crop which was not a bumper crop by any means.

Demand

Conflicting reports come from our correspondents with reference to the demand. The local demand in most instances is from fair to good but in a number of cases there is a very light demand. The local demand and the jobbing demand seems to be about alike. However, it is our idea that the jobbing demand is fast picking up and our latest reports bear this out. Undoubtedly there is a scarcity of good bottling honey to be obtained in carload lots and the jobbers are going to bid more for it just as fast as they can justify their price with the competitor. In fact if there was not even keener competition than usual on the part of jobbers of honey, no doubt the price to beekeepers would advance very rapidly.

Prices

In most cases the prices of honey have advanced over a year ago and we have a number of reports of price cutters going out into the local markets and offering honey at a much lower price than in 1932.

This is somewhat surprising because the general tendency on the part of the sorghum makers has been to advance their price this year owing to the fact that the standard sorghums and syrups made by the larger companies have advanced and the little fellow has gone up in proportion.

There is no doubt whatever that the jobbing price on honey is much advanced over last season. In most cases it is at least 1 cent per pound and in some 2 cents over last year. We have a report from Colorado of an entire crop consisting of more than two carloads being sold at a price of 4½ cents f.o.b. shipping point which would make about a price of 6 cents delivered to the large packing centers. This seems to be approximately a minimum price and we have reports of a number of sales being made at 6 cents per pound f.o.b. shipper's point in the Central West. Reports from a number of Michigan beekeepers are to the effect that 6 cents is going to be a minimum price with a lot of the large producers and some of them are holding as high as 7 cents to 8 cents for their good white honey.

There is no doubt that the price competition is keener than ever this year though the anticipation was that the N.R.A. would reduce competition. This is particularly true on the part of the small retailers who are whacking prices everywhere to get some money out their honey. It is also true on the part of bottlers of honey who surely should be in better agreement than to cut under each other and thus have to force themselves to reduce the price paid to the producer of honey.

Our records show that the prices of honey generally, however, are being well maintained and advanced approximately 10 per cent in retail prices.

It is comb honey, however, that shows the biggest boom and the nicest advances in prices. This is undoubtedly due to the scarcity of comb honey owing to the light crop which is not producing the good production of comb honey. In some instances, comb honey has gone up 25 per cent to 50 per cent and we find prices ranging in the East from $4.50 per case to as low as $2.25 to $2.50 per case in the West.

It is the writer's opinion that honey prices are not going to go down from the present point unless we have something unusual in all marketing lines which is not to be anticipated at this time. We can hardly approach the lows of last year.

MINIMUM PRICE SUGGESTIONS FOR 1933-4	Car Lot White	Car Lot Amber	C. L. Comb No. 1	10 lbs. to Grocer	10 lbs. Retail	5 lbs. to Grocer	5 lbs. Retail	10 lbs. Comb Ret.	5 lbs. Comb Ret.	1-lb. Jar to Grocer	1-lb. Glass Retail	Comb to Grocer	Comb per Section
Northeast	.07	.05½	---	1.30	1.65	.70	.85	---	---	.18	.20	4.00	.20
Southeast	---	---	---	---	---	---	---	1.20	.65	---	---	---	---
South	.05	.04	---	---	---	---	---	1.20	.65	.15	.20	---	---
Texas	.05	.04	---	---	---	.50	.60	1.20	.65	---	---	---	---
Southwest	.05	.04	---	.75	.90	.50	.60	---	---	---	---	2.50	.15
North Central	.06	.05	3.00	.95	1.10	.50	.70	---	---	.17	.20	3.50	.20
Plains States	.05½	.04½	3.00	.80	1.00	.45	.55	---	.75	.17	.20	3.00	.15
Intermountain	.05	.04	2.75	.75	1.00	.40	.50	---	---	.17	.20	3.00	.14
Pacific Northwest	.05	.04	---	.75	1.00	.45	.55	---	---	---	---	---	---
California	.05	.04	---	.80	1.00	.45	.55	---	---	---	---	---	---
East Canada	.08	---	---	.90	1.10	.55	.65	---	---	---	---	---	---
West Canada	.07	---	---	.80	1.00	.45	.60	---	---	---	---	---	---

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Write for Our Special Club Offers
AMERICAN BEE JOURNAL

Edwin H. Guertin 201 N. Wells St. Chicago
Buy and Sell All Grades Extracted Honey
References: 1st National Bank, R. G. Dun or Bradstreets Commercial Reports.

Meetings and Events

(Continued from page 443)

a Virginia beekeeper." Not only is this true but woe unto him who attempts it. Proud are we to live in such a tribunal community. They met, they talked and they ate together. A commonplace occurrence, but here is the unusual for a picnic meeting: They voted a second $10.00 from the treasury funds to the American Honey Institute. They voted individual support for the Honey Institute of not less than one cent per colony in honey or money. They outlined and recommended minimum prices on various grades and packs of honey and agreed to adjust quotations accordingly.

Honey for the Institute is already coming in and you can bank on Virginia beekeepers, for increased support. As a personal contribution the writer has agreed to furnish all containers for honey from Virginia delivered this year in 5-lb. pails for the Institute. The G. B. Lewis Co., has granted use of their warehouse as storage and I will see that it is sold and proceeds forwarded to the Institute. Bring or ship to G. B. Lewis Co., Lynchburg, Va., what honey you can spare and share in the advertising campaign that will keep you on the jump to supply the demand. A. D. Hiett.

California Law Sustained

For several years past, the state bee inspection act of California has been a bone of contention in the courts. A decision handed down by the state supreme court in the case of C. I. Graham, Colusa County beekeeper, in which he attempted to enjoin the enforcement of the apiary inspection law, states that the act is constitutional. Graham named as defendants M. H. Krebs, state supervisor in charge of inspection work; H. M. Kingwell, Colusa County agricultural commissioner, and George B. Beckers, justice of the peace of Williams Township.

In its decision handed down on Monday, August 14, 1933, the state supreme court agrees with the Colusa County superior court, which had refused to issue an injunction, that there is no excess of authority in the enforcement of the act, nor is the act in violation of the fourteenth amendment.

Graham was facing a charge of violating the inspection act in Justice Becker's court at Williams, at the time the suit was instituted. Later, Graham was acquitted in Justice court.

In view of the high court's decision, other similar litigation pending in San Joaquin County may be dismissed.

D. G. Souborn,
Utah.

Do Carniolans Suit the Humid Climate of Chesapeake Bay?

The Atlantic coast is given a temperate and humid climate by the Gulf stream, and our honeyflow is a long and thin one from red maple in April to aster in October, except the tulip tree, which theoretically should produce large results in May, but in my case it does not.

My apiary is ten miles east of the Bay where the dark rich crystalline soil makes splendid tulip trees, and the narrow valleys are underlaid with marble, which makes some little clover. I have more large tulip nearby than any spot in America, but last May my bees (hybrids of poor quality) preferred to work on blackberry rather than gather the tulip nectar. We have a large variety of plants which make a delicious flavor of amber honey, but this is not a section of large yields.

This season we had eleven days of cool cloudy weather during fruit bloom, which was therefore lost to the bees, and I want to know if it will help any to introduce Carniolans? I am aware that merely flying around in cool weather won't help any, if the flowers do not flow any nectar—also our winters do not get below 10 above often, but we have days and weeks of cloudy weather.

My problem is to pull down the nectar from those 400 large old tulip trees, which the native bees I have don't seem to go after—liking other flowers better. As foragers over a large and thin territory, are the Italians best? Or are Carniolans good for tulip nectar?

Red maple, dandelion, tulip, locust, three clovers, and much sweet clover, sumac, many valley plants of mint family, water mallow, miles of goldenrod and then asters until frost in October (maybe a hundred other lesser nectar sources)—An amateur, I ask to know. Edmond Fontaine,
Maryland.

Bee Book from South Africa

From the Mission St. Wendelin, Mariannhill, in South Africa comes a new bee book entitled, "Money in Bees in South Africa." It is written by Brother Lucian for the purpose of opening the way to bee culture for beginners.

The book is well bound and printed on nice paper and contains 144 pages of information of interest to the novice. The author has gleaned from a wide variety of sources and quotes many well known authorities on bee culture. The book covers the field of beekeeping rather completely for a book of this size. It should be a welcome publication for South Africans who wish to get started with bees.

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The stock is true. The breeders are well selected. Every queen is mated to a Caucasian drone.
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Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

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HONEY FOR SALE—Keep your customers supplied with honey. We can furnish white and light amber honey at attractive prices. Packed in 60-lb., 10-lb. or 5-lb. tins. Dadant & Sons, Hamilton, Ill.

FOR SALE—Black Hills' Fancy White Extracted Honey in 60-lb. cans. Write for prices. Ernest W. Fox, Fruitdale, S. Dakota.

FOR SALE—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

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CHOICE Michigan Clover Honey. New 60's. David Running, Filion, Michigan.

CHOICE SWEET CLOVER HONEY, New, 60's. Thos. Atkinson, Rt. 5, Omaha, Nebr.

HONEY FOR SALE—Fine, white clover honey in 60-lb. cans. Write for prices.
A. G. Kuersten, Burlington, Iowa.

FOR SALE—Well ripened, extracted honey gathered from clover, carlot or otherwise. Will be pleased to submit sample on request. Also section or shallow frame comb honey in local shipment. Colorado Honey Producers' Association, Denver, Colo.

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Sylvester Legat, Spring Valley, Ill.

AMBER HONEY in 60's. 6 cents.
Stauble Bros. Apiaries, Canton, N. Y.

CHOICE CLOVER HONEY in 60's.
Alfred Stutt, Creston, Iowa, R. 5.

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G. H. Ohmert, Dubuque, Iowa.

WHITE CLOVER COMB HONEY—Packed eight cases to the carrier.
Earl Baker, Genoa, Illinois.

WHITE CLOVER extracted honey, sample 15c in stamps.
Kalona Honey Co., Kalona, Iowa.

FANCY CLOVER extracted honey. New 60's.
Oakdale Apiaries, Rush City, Minn.

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W. S. Earls & Son, New Canton, Ill.

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FOR SALE—Extracted honey in 60-lb. cans.
Henry Hettel, Marine, Illinois.

HOWDY'S HONEY—White clover extracted in new sixties, 6½c per pound. Amber 5½c. Howard Potter, Ithaca, Michigan or 72 Perkins Hall, Cambridge, Massachusetts.

EXTRACTED HONEY, mostly clover, $3.50 per 60-lb. can. Not prepaid.
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FOR SALE—Fancy, extracted white clover honey in 5 lb. and 10 lb. pails and in 60 lb. cans. Write your wants and ask for prices. Emile J. Baxter, Nauvoo, Ill.

HONEY AND BEESWAX WANTED

WANTED—HONEY and BEESWAX. Beekeepers will find it to their advantage to communicate with us. Please send samples, state quantity available and prices. CALIFORNIA HONEY COMPANY, Hamilton & Company, Agents, 108 W. Sixth Street, Los Angeles, California.

WANTED—Comb and extracted honey. Mail sample, state quantity and price.
Sherfick Farms, Shoals, Indiana.

WANTED—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for same. J. S. Bulkley, 816 Hazel St., Birmingham, Mich.

WANTED—Carlots or straight truck loads of HONEY, cash on delivery. You will find us a most desirable outlet for your entire crop as we are the largest packers of fine honey in the Middle West. Send samples and prices. Payments made through the First National Bank of Chicago. W. F. Straub Laboratories, Inc, 5520 Northwest Highway, Chicago, Ill.

WANTED—Car lots honey; also beeswax, any quantity. Mail samples, state quantity and price. Bryant & Cookinham, Inc., Los Angeles, Calif.

EXTRACTED HONEY WANTED—Carloads and less than carloads. Send sample and best price delivered Oconomowoc.
C. W. Aeppler Company, Oconomowoc, Wis.

BEST PRICES PAID for light honey in exchange for package bees, spring delivery. Prepare now for a larger volume and profit next year. Gillis Graham, Cameron, Texas.

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The Beekeepers Item, San Antonio, Texas.

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FRAMES — Standard Hoffman, $29.50 per 1000. Send for cut rate price list today. Northern Bee & Honey Co., Osceola, Wis.

YOUR WAX worked into medium brood foundation seven and eight sheets to pound at 15 cents per pound.
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MISCELLANEOUS

WE BUY DOMESTIC RABBIT SKINS. Price list free. L. I. Farm Prods., Rosedale, N. Y.

PLANS FOR POULTRY HOUSES — All styles; 150 illustrations. Tells you the type to build for your particular locality. Secret of getting winter eggs, and copy of "Inland." Send 25c. Inland Poultry Journal, Spencer, Indiana.

MARBLEBOARD BINDER—For back copies of the American Bee Journal. Will hold two years. Keeps your magazines in shape for ready reference. Price only 75c, postpaid. American Bee Journal, Hamilton, Ill.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, 10/6. The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

HAVE YOU any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so, send us a list. American Bee Journal, Hamilton, Ill.

"Are You on the Program?"

By Luella B. Lyons
Illinois

I had been invited to attend a quarterly entertainment staged in the little town where I had gone to transact some business. Though a program sheet had been shoved into my hand, I hadn't paid any heed to it. However, the fellow sitting next to me whispered, "The next act is always good. Folks follow this act everywhere and we can always count on it being the wow every time!"

Naturally I hunted down the list of acts till I found the place. There I read: "HONEY AND BEE," the minstrel act from the Stahl Bee Farm. That sounded mighty interesting and the act proved to be one of the finest on the entire program and it earned more applause and encores than all the other acts together. Another thing I noticed was the fact that they mentioned a recipe which was to be found on the back of the program. I later learned that the Bee Farm paid for that space and furnished the minstrel act gratis to all programs.

I was also told that at entertainments such as women's clubs, mothers' organizations, ladies' lodges and the like, the minstrel pair was constantly being called upon and it was at these places where multigraphed copies of new recipes were handed out to those who wished them.

Shortly before my visit to this little town, they had held a booster program for the town via the radio of the nearest city. The first call for talent was sent to the bee farm minstrel pair. On this program, even, the pair mentioned, in their very own gag fashion, the free recipe sheets that they would send upon request.

Strange to say, though the radio station was only a small watt station, more than twelve thousand requests were received. It boomed the honey selling business everywhere in the area and the Stahl farm received many repeat mail orders as well as a number of retail merchant orders.

If you and the bees on your place are supporting the farm, why not try being on the program and before long, everyone for miles around can never remember honey and bees without thinking immediately of your farm and that your place is THE place to purchase these products. A couple high school boys or maybe you have two children of your own that have a little flair for talking in negro dialect and would welcome a chance to practice up on a little minstrel act. In this town where I first heard this bee farm act, I learned that the pair to which I listened was the fifth pair of actors the farm had employed for the preceding pairs had become so practiced and popular that they had been hired as regular talent on distant radio stations.

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Final 1933 Clean-Up Price Only 25c Each

We guarantee safe arrival and entire satisfaction.

Thirty-nine years of careful breeding gives us a strain of pure 3-banded Italian bees uusurpassed for disease resistance and honey production. They are gentle also.

M. C. BERRY & CO., Box 684, Montgomery, Ala.

QUEENS

DOLLAR - A - YEAR CLUB

ONE HUNDRED of the three hundred wanted to make up the roster of this exclusive organization have sent in their dollar, indicating their desire to sustain the Institute during this trying period.

While it was the intention of the Finance Committee to limit this organization to three hundred, it has now been decided that the roster will remain open until four hundred loyal beekeepers have joined the Dollar - a - Year Club by sending their dollar to Mrs. Malitta Fisher Jensen, 417 North Few St., Madison, Wisconsin.

Lewis Parks,
Chairman Finance Committee,
American Honey Institute.

MODERN are the B. B. PLIERS and HIVE TOOL Combined, the new era frame lifter. Beemen say, "We are delighted," to work with B. B. FRAME BAR LOCK, handy in swarming control. B. B. SCRAPER, for quick and clean work. Price: each $1.00 or $2.75 for all three, by mail. Literature free.

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ADVERTISING PAGES REMOVED

The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

My old friend J. F. Diemer writes again in regard to the comment on queen cells: "Yes, I will qualify my statement and say positively that bees, whether queenless or not, will not destroy capped cells. However, bees do destroy uncapped cells, but the queen never does."

Now then, Diemer, what happens when a strong colony has prepared for swarming with numerous capped cells and there is a sudden check of the honeyflow? We know, of course, that in such cases the swarming fever quickly subsides. Do the bees supersede the queen and let it go at that?

— : —

A most interesting visitor recently was Mr. Kees Matthes of Breukelen, Holland, who is making a tour of the United States. He spent seventeen months in Central America and has also visited South America and Cuba. He has been in this country since June and is on his way westward to visit from Iowa to California. He will return by way of the southern states and sail for Holland in December.

— : —

Mr. Matthes tells us why the skep continues to be popular with many progressive beekeepers in the old world. Those who depend upon the heather for a portion of their crop find it difficult to manage with the modern hive. Since heather honey is so thick that it can hardly be removed from the combs by an extractor the usual equipment is not suited to it. Accordingly the beemen hive their swarms in skeps for the heather harvest which comes in August. When the season is over the bees are killed and the honey cut out.

— : —

Now we read that Uncle Sam will make a drive to clean up the racketeers among the lawyers. I have always wondered why the legal profession did not clean house. A small percentage of attorneys who are crooked has made the public distrust the entire profession. Every honest lawyer should help Uncle Sam do a good job.

— : —

Letters still come to me regarding a paper on bee inspection which was presented at the Iowa convention a couple of years ago. R. G. Richmond, of Colorado, calls attention to a section of San Luis Valley which was found to be more than 75% infected with disease. After two years the percentage had been reduced to less than one percent. This, of course, is a very good showing, but the one percent still remaining only proves my point that we are unable to eradicate the disease permanently from any large area. I still contend that some better method of dealing with bee diseases than any now in use will yet be found.

— : —

A Kansas beekeeper writes that smartweed (heartsease) makes a very dark honey which resembles sorghum molasses. In Iowa it often makes a dark amber honey of strong flavor. From Indiana I have received samples which were very light in color but which had the characteristic flavor which identified the source. Is the difference due to the soil, or temperature, or humidity.

— : —

Jay Smith writes, "the common ten-frame hive is entirely too small. As a makeshift we stack them up to give the colony adequate room. Any one who has used them knows the joy of hunting over twenty or thirty frames to find the queen. If there is a honeyflow you lift off half a dozen supers. If there is not, think of the mess with robbers. **We want less frames and larger ones.**" To all of which I agree. Jay and I are usually arguing about something but this time I accept his entire letter.

— : —

A letter from J. J. Wilder in reply to my October postscript regarding his writing about Caucasians: "I have never during the twenty years of experience found any reason to add anything further. I consider the Caucasians best for my territory, management and manner of production. The only change I see is that the extensive gathering of propolis has gradually faded out. They gather no more glue than the common Italians."

Hy. W. Sanders who deserted Manitoba for sunny California, and his bees for a job in a bank, is back again in his old haunts. Perhaps Hy has discovered the truth in the old adage, "all is not gold that glitters." Banking has not been a pleasant business in recent months and California with all its sunshine depends upon the remittances from eastern localities. Manitoba may have long winters but it is one of the best beekeeping countries so far discovered. Since we have plenty of bankers anyway, I am glad to see a man like Sanders back in the beeyard.

— : —

If Uncle Sam wants to solve the question of farm surplus all he needs to do is to draft the farmer under NRA and limit him to a forty hour week. With all farmers working only forty hours each week it won't be long until the world begins to feel hungry. The surplus will have disappeared and there will soon be talk of limiting human reproduction to the number which can be fed. Apparently there is no animal so dumb as a man.

— : —

O. G. Borton, of Scotland, South Dakota, asks a pertinent question concerning the sumac. He wants to know whether beekeepers east and west are talking about the same thing when they discuss sumac. He calls attention to the fact that eastern sumac (some spell it sumach) is a larger shrub than the one we know in the middle west.

— : —

The staghorn sumac common to New England grows to the size of a small tree. It is very attractive to the bees but our common red berried species also grows there and the bees gather honey from both species. For some reason but little honey seems to come from sumac in this region.

— : —

The recent notes on persimmon which have appeared on this page have brought several letters regarding plants which do not have both stamens and pistils on the same individual. C. T. McKnight, of Louisiana, writes that the negroes say that the barren trees are the males while the fruitful ones are the females. The darkies are right, of course, and the same thing applies to many other plants as well, including mulberry, and sumac.

— : —

It is apparent from the direction in which we are going that very great changes lie ahead; changes which may ultimately result in the complete reorganization of our system of society. We may not expect them quickly, but they are probably nearer than we think.

There are many who very sincerely seek to abolish rent, interest and profit. We would expect that to abolish profit would stifle initiative, but if at the same time we destroy poverty, robbery, extortion and kidnapping it may be worth the price. If for our labor we get credit which can be exchanged for goods only by the original recipient and can neither be stolen or given away we remove the source of much of our present day difficulty.

Personally, I am inclined to be conservative and fearful of change like most men old enough to be grandfathers. Fortunately youth is daring and willing to try new ways and thus the world is able to progress.

— : —

A very interesting letter from C. W. Aeppler, of Oconomowoc, Wisconsin, tells of a visit with Charles, the son of James Heddon. A generation ago the name Heddon was a very prominent one in the beekeeping world. Many of our older readers will be glad to know that Mrs. Heddon still lives at the age of 83 and that she is still very alert and active. Doubtless she could tell us many interesting stories about the men of other days who so often visited at the Heddon home. Langstroth, Alexander, Doolittle and other prominent leaders were frequent guests in the golden age of beekeeping. The changes of our present day are bringing a different type of men to the front and the old days will never come again.

FRANK C. PELLETT.

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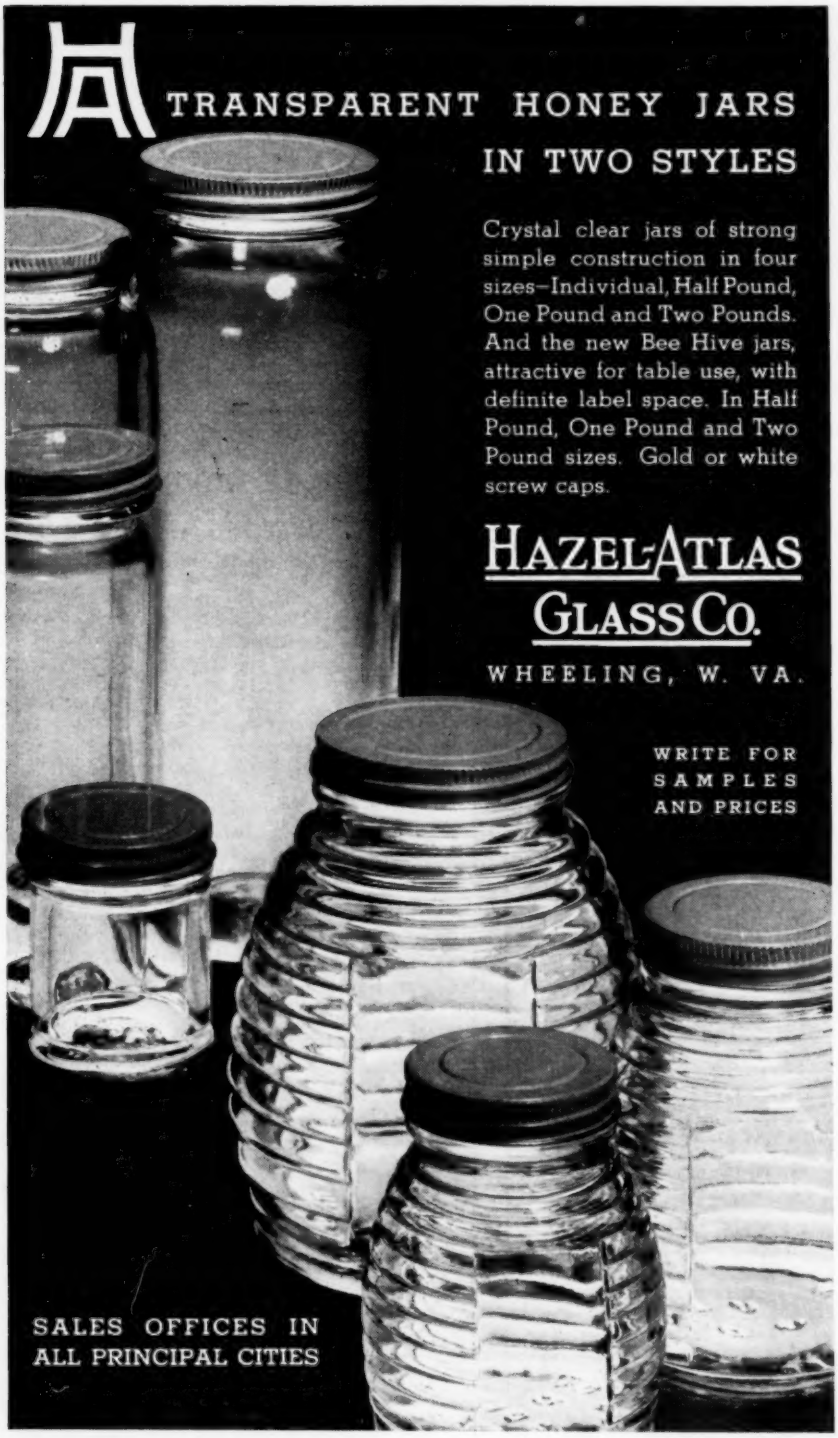
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